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THE
YOUNG LADIES
SCHOOL of ARTS.

CONTAINING
A great Variety of Practical Receipts,
IN

GUM-FLOWERS	COSMETICS	JAMMS
FILLIGREE	JELLIES	PICKLES
JAPANING	PRESERVES	CANDYING
SHELL-WORK	CAKES	MADE WINES
GILDING	CORDIALS	CLEAR STARCH-
PAINTING	CREAMS	ING, &c.

Together with

Directions for breeding CANARY BIRDS, and breed-
ing, nursing, and ordering of the SILK-WORM.

Also a great many CURIOUS RECEIPTS both use-
ful and entertaining, never before published.

By Mrs. HANNAH ROBERTSON.

The Fourth Edition, with large Additions.

Y O R K:

Printed at the New PRINTING-OFFICE, in
COPPERGATE, for Mrs. ROBERTSON,
and sold by all the Booksellers in
England and Scotland.

M,DCC,LXXVII.

1777





DEDICATION.

T O

Mrs. LOCKHART,
CRAIGHOUSE, SCOTLAND.

MADAM,

IN an age where external beauty seems to be most esteemed, you are too obvious to each eye, to need a description from my feeble pen.

You have likewise set your own sex an example in performing the relative duties, that no one who hath the happiness of knowing Mrs. Lockhart are strangers to.

Yet there are perfections many Ladies may lay claim to; but how few are there,

A 2

who,

ii DEDICATION.

who, in the bloom of life, and in possession of every sublunary pleasure, leave those gay scenes of joy, to visit the dreary abodes of the unhappy, whose inhabitants are the widow, the fatherless, and orphan; where your presence seems to dissipate the gloom that over-shadows them: The languid eye of distress brightens up at your approach, and appears insensible of the miseries of indigence and misfortune.

The Almighty has endued you with sensibility and benevolence, which render you irresistably agreeable, and is the true distinguishing character of a great mind, always ready to bestow on distressed merit, and to assist the poor in their honest endeavours.

In the history of Peru, we are assured that their Incas above all their titles, esteemed that the highest which marked them lovers of the poor; a name more glorious, than the most dignified epithets of grandeur.

That you may long, very long be spared on this terrestrial globe, as a shining example of female virtue; and when it shall please the Divine disposer of all events



DEDICATION. iii

events to call you to the celestial mansions of bliss, may you have it pronounced, 'Come, thou blessed of my Father, enter thou into the joy of thy Lord: For I was sick, and thou visited me, a stranger, and thou came unto me, &c,' Is most zealously desired, by

M A D A M,

Your most humble servant,

York, March 25, }
1777. }

HANNAH • ROBERTSON.

A 3

PREFACE.

DEDICATION



P R E F A C E.

THE reception this Book has met with from all ranks of people, has encouraged me to present the public with a fourth Edition. The YOUNG LADIES SCHOOL of ARTS was so well received in North-Britain, that three large impressions were bought up in a little time.

The following receipts are the result of many years experience, and will be found of infinite use to such as are lovers of those nice and ornamental arts, as they are calculated for the improvement or amusement of Young Ladies, as well as those that have the care of children's edu-

vi P R E F A C E.

education, who, though properly instructed themselves, will find it an advantage to have receipts at hand to put them in mind of what they formerly learnt.

As I am the mother of a number of children, and have of late years had the education of the youth of our sex much under my care; I have not however followed the common plan for girls, not that I will pretend to say I am absolutely in the right, or lay it down as a rule for others; but it appears to me to be most properly adapted to their tender years. Infancy is called the flowery path, we therefore ought to strew it with flowers for them, and not to give them any task to ruffle or sour their dispositions, by putting into their hands things too abstruse and intricate for their tender capacities.

As soon as a girl has learned to read properly, she is commonly put to the knitting of stockings, which is easily acquired: Then, the next thing is a piece of gauze put into her hands, called a sampler, on which she is to sew letters and different figures, in doing which,
she

P R E F A C E. vii

she finds so much difficulty, that she takes a real disgust at school.

Nay, put the same piece of work into the hands of the mothers of those children, notwithstanding their having formerly learned it, it would prove a very irksome task, and cost them much trouble to execute it: And I am sure was the teachers of those children to be asked, if they have as much trouble with any part of their education? and, if they are ingenuous, they will answer, No.

And all this mighty work is only to mark linen, which they might learn to do in a few days if of a proper age.

The Dutch who are a frugal and laborious people, set their children very early to make flowers, toys, &c. as they are sensible that those things which children are most fond of, they will perform with the greatest pleasure and alacrity.

Their slender fingers likewise seem better adapted for fine work than those of a more mature age: I know it by experience, that a child of eight or nine years of age, will learn to make flowers
better

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better than at any other time of life, and will learn their sewing better at ten or eleven, than sooner. I have often found that in teaching girls of the same age and equal capacity, where some of them have been set to plain work, some to embroidery, sattin work, &c. they would not have been sat to work above an hour, before they seemed heartily tired; when those at flowers, &c. would have sat three or four hours and left off with regret; and even those whose genius seemed so bad as to appear void of any inclination to learn any thing, yet would have learned to make flowers as soon and well, as those of the brightest parts; and by adorning themselves with their own work have acquired a taste for neatness, which before they seemed to pay no attention to.

I have therefore placed the receipts for making flowers, jappanning, &c. first. They are made as distinct as possible, though practice is the only thing that can teach properly. Such Ladies as have time to spare, may do a great many pretty things at a small expence, for

for their own pleasure, or the ornament of their houses.

I would in a particular manner recommend the practice of those arts, to young women in a middling station of life; and in case of misfortunes happening, which is not uncommon, their knowledge in such things would greatly make for their advantage, and be of real use to them. It is too well known, how small a value is set on women's work, so that the cleverest at the needle can scarcely earn subsistence; but a knowledge of the different curious branches mentioned in this Treatise, will always find employment amongst people of fashion, and especially in towns of trade and commerce, by which they might earn a tolerable living.

As most of the curious articles recommended in this Book, and which derive their beauty and perfections from the invention and ingenuity of our sex, are generally brought from abroad at a great expence, and which can be made amongst ourselves at a much lower rate, by procuring proper shades of tiffany and leaf silk; they appear, when properly done,

as little inferior to those brought from abroad. Would the British Ladies for a moment reflect what sums of money are laid out for those trifles, and at the same time, think, what number of young girls is in those kingdoms, who would think themselves happy in being employed in this way, whose hands seem ill adapted for more rugged tasks, and who in their infancy basked in the sunshine beams of fortune, and by some sudden reverse, in which they had no hand, drove from affluence and happiness, to wretchedness and want; I believe there are few Ladies, but upon mature reflection, will find some of this kind either amongst their own kindred, or acquaintance; would it not then give an inestimable pleasure to a feeling mind to have it in their power to administer comfort to the distressed, by supplying them with the necessaries of life for their work; and then, being so employed, would not suffer them to brood over their misfortunes; and, a morsel purchased by their own labour, would to a generous mind, be more grateful and sweeter, than that received by charity.

As

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As I myself have been one of those children of affliction, being in the early part of my life left with a number of infant children, whose daily subsistence I found most depended on the works of my hands, and who formerly was no stranger to the smiles of good Dame Fortune, whose favours are not to be depended on: I therefore can by my own experience, advise those of my own sex, who may be left in the same unhappy situation to exert their talents to procure bread for themselves and infant family; and that Divine Being who feeds the young ravens, will bless their honest endeavours, and convey more real satisfaction and self approbation, than fortune can give.



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Verfes



Verases applicable to the following
ANALYSIS.

TO learn the language of the four parts
To guide the pencil, turn the mental page
To learn the language of the four parts
And foreign nature's dainties in their race
To say their power into tropical life
To give living in light and shade
Will work's home man's full delight to make
And by knowledge will learn, what all will
With every pencil can be made
To make the virtues, and make the hills
And sweeten all the hills of human life
To be the world's life and world.

VERSES applicable to the following
TREATISE.

TO train the foliage o'er the snowy lawn;
To guide the pencil, turn the tuneful page,
To lend new flavour to the fruitful year,
And heighten nature's dainties, in their race
To rear their graces into second life;
To give society its highest taste;
Well-order'd home man's best delight to make,
And by submissive wisdom, modest skill,
With ev'ry gentle care-eluding art,
To raise the virtues, animate the bliss,
And sweeten all the toils of human life:
This be the female dignity and praise.

THOMSON





YOUNG LADIES SCHOOL OF ARTS.

PART I.

OF GUM FLOWERS.

THERE are a great variety of materials uted in the making of gum flowers. whether they be intended for putting in jars, breast-flowers, pongs or wreaths: the most beautiful and nearest to nature are those made of the worm-bags: Have fine paper of all colours and shades ready stained for making ornamental flowers for jars; have green vellum at hand, made according to the receipt afterwards to be given: For cambrick of different red shades, the easiest way is to give it to a silk-dyer, or
A stain

2 *The* YOUNG LADIES

stain it yourself with sea-flower ; or you may take a piece of pink silk, and roll your white cambrick up in it, and put it to steep in strong spirits ; close it up for two or three days, and you will have a beautiful red extracted from the silk ; then take the clearest gum-arabic dissolved in water ; dip your cambrick in it, then lay it upon a clean pane of smooth glass, and hold it at a distance from the fire till it be dry ; then pull it carefully off, and it will have a beautiful gloss : you must have three different shades for a rose, and place the darkest in the heart : be sure to have either natural flowers or good patterns to copy after : you may also have pretty flowers of flax silk, by combing and gumming it on the glass, for variegating roses, tulips, pinks, anemonies, ranunculas, polianthos, daisies, auriculas, &c. Have always at hand good carmine and other colours, with clean pencils.

For yellow cambrick, it may be dyed either with a strong tincture of saffron or turmeric purples with logwood ; blues with liquid blue or verditer.

COLOURS FOR GUM FLOWERS.

To make green vellum : Take fine white parchment, and wash it in a cold lee, till it comes clear from it ; then squeeze out the liquor ; take distilled verdegrease ground with vinegar ; add a little sap-green to it ; make it neither too thick nor too thin ; then soak your parchment



SCHOOL of ARTS. 3

parchment in this colour a whole night, and after that rinse it in water; stretch it directly on a frame, and set it to dry; then take varnish, lay it on both sides, and set it in the sun to dry; after this cut the parchment out of the frame into leaves, as large as you please, and lay them in a book under a press, to keep them straight: This vellum is for making leaves for all sorts of gum-flowers, breast-flowers, garlands, pongs, &c. and in the doing you may make it either lighter or darker as you please.

PAINTED RIBBONS.

Ribbons may be painted in various patterns; some in sprigs, flowers, or a running pattern, according to fancy; others done from Dresden patterns, all of one colour: only observe, that the ground must be laid over with strong allum water, otherwise the colours will fly off.

TO MAKE FILLIGREE.

Filligree is a very pretty work, and, when executed with judgment, will last hundreds of years, and may be made to represent various figures, such as beasts, birds, houses, flowers, trees, coats of arms, &c. The first thing proper to be done, is to stain paper fit for these purposes with the various colours you chuse; such as green done with sap-green dissolved;—yellow with gum-bouge;—a vermilion colour;—red with red ink;—blue with liquid
A 2 blue;

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blue ;—purple with the purple colours in a receipt among the paints. The best way to lay on the colours is to have your paper flat on a table, and the paint laid on, and smoothed over with your hand ; when dry, let it be glazed over ; then deliver it to a book-binder to be gilded and cut in very narrow slips ; after which your own judgment, or a pattern, will direct you, whether you intend for picture or glass frames, boxes, &c. Let the wood they are made of be fir, as the pins with which the rolled up slips are fastened, will not penetrate any other wood : take care not to let any of the glue fall on your work after the filligree is laid on, because it will dim the gilding ; and let the glue dry before you take it off the pins.

PONGS AND GARLANDS,

Are so various, that directions cannot be given here, but must be made either according to fancy or from patterns ; only be sure to have always dyed silk, stained paper, paints, silver'd wire purl, flats and spangles, frosting, shakers, and vellum, and feathers dyed of various colours.

TO MAKE VARNISH OF ANY COLOUR FOR DRESSING-BOXES, &c.

Take a gill of spirit of wine, and four ounces of red or black sealing wax, or virgin wax, which you may make any colour you please :
the

the red with vermilion ; the green with verde-grease ; blue with Prussian blue ; and yellow with King's yellow : Pound your sealing-wax fine, and searh it through a lawn sieve ; put it in a wide-mouth'd phial with the spirit of wine ; let it stand within the air of the fire for forty-eight hours, and shake it often ; then lay it on with a japanning-brush ; when dry, lay on a second, then a third, and it will be very pretty.

RECEIPTS FOR JAPANING AND GILDING.

If you intend it for japanning, your wood must be plane-tree : take a pound or two of the shreds of white glove-leather ; cover them with clean water, and let them soak a night ; then put six quarts of water to the two pound, and boil them till the size be very strong, and sticks to our fingers like glue ; when your size is made, take white-lead or chalk ; lead for japanning, and chalk for gilding ; grind them very fine, with a little pure water, on a marble ; then put some size to it ; warm it over the fire, and stir it well ; let it be the consistence of a thick cream ; then with a fine brush lay it over your wood, and let it thoroughly dry before you lay on another coat ; this you must repeat twelve times ; moisten it all over with clear water, in order to smooth your ground ; when dry, rub it over with Dutch rushes, or a piece of new linen cloth, till it look smooth and fine ; then, with a hair pencil, lay it over with size-water, if for gilding ; then take your

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leaves of gold, and cut them on a leather cushion, and lay them on your work ; and when dry, polish it with a tooth.

After your ground for a white japan is laid on as above, cut your prints, or flowers of your own painting ; go over the backs of them with strong gum-water, or a paste made of fine flour is rather better ; then place them according to your fancy ; but be sure they be all straight laid, and close to the ground, to prevent their rising ; when thoroughly dry, take as much white spirit varnish as will go over your work ; be sure to pour out no more than what is sufficient at a time, as the remainder will turn tough and be useless ; lay it on with a fine hair brush before a fire ; but take care not to go too near the fire, else it will all blister and turn rough : repeat this twelve times ; only each coat must be dry before you lay on another ; and it will be as clear as a looking-glass : you may polish it with a little tripoli, if you chuse it.

For black japan, take ivory-black.

For red, vermilion.

For blue, Prussian blue or verditer.

For crimson, lake and carmine.

For yellow, King's yellow, mixed with white lead.

For green, distilled verdigrease ; and order all as before directed.

TO PAINT WITH MEZZOTINTO ON GLASS.

There can be no representation so elegant as a picture done in this way, having a peculiar softness not to be found in other paintings. Take what mezzotinto prints you choose, according to your taste and fancy; cut off the margin, and lay it flat in a dish with clear hot water; let it remain on the surface till it sinks, then it is enough; when you take it out be careful not to break it, and daub it betwixt clean cloths or papers, that no water may appear, and yet the print be damp; then lay it, face uppermost, on a flat table; have ready a plate of pure crown glass, free from all spots or scratches; lay some Venice turpentine all over one side of it with a soft brush, and hold it to the fire a little, to make it run quite equal and thin; then let it fall gently on the print; then press it down gently, that the turpentine may stick to the picture; then press the print with your fingers from the middle towards the edges of the glass, that no blister may remain; then wet your print with a sponge of soft cloth, and the paper will peel off and leave only the impression on the glass: when it is dry, take a pencil and wet it all over with oil of turpentine till it is quite transparent; and set it to dry, when it is fit for painting.

TO

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TO CAST PICTURES WITH ISINGLASS.

Take what quantity you please of the finest isinglass; cut it fine and cover it with brandy; close it well, and let it soak all night; then put some clear water to it, and boil it on a gentle fire, till a drop of it is like a clear jelly; strain it through a cloth, and put it in a cool place; when you are about casting a picture, cut as much of the jelly as will cover your copper-plate; dissolve it in a clean pipkin, and mix any of the following colours you choose with it.

For red, vermilion or carmine finely ground.

For blue, take liquid blue

For green, distilled verdigrease, finely ground.

For yellow, saffron steeped in fair water

A gold colour is made with red and saffron yellow.

Gold, silver, or copper well ground, are to be mixed with the materials, and poured quickly over the plate; have your copper-plate clean, and pour your dissolved isinglass over it, but not too hot; be sure the plate be all covered; set it in a moderate warm place to dry, and when thoroughly dry, with the thin blade of a knife lift it up from the plate.

On GROTTOS and SHELL-WORK.

See with what art each curious shell is made,
 Here carv'd in fret-work, there with pearl inlaid :
 What vivid streaks th' enamel'd stones adorn,
 Fair as the painting of the purple morn !
 Yet still; not half their charms can reach our eyes,
 While thus confus'd the sparkling chaos lies.
 Doubly they'll please, when in your grotto plac'd,
 They plainly speak their fair disposer's taste ;
 Then glories yet unseen shall o'er them rise,
 New order from your hand, new lustre from your eyes.
 How sweet, how charming will appear the grot,
 When by your art to full perfection brought !
 Here verdant plants and blooming flowers will grow,
 There bubbling currents thro' the shell-work flow.
 Here coral mixt with shells of various dyes,
 There polish'd stones will charm our wond'ring eyes.
 Delightful bower of bliss ! secure retreat !
 Fit for the Muses and Statira's seat.

OF SHELLS, AND POLISHING THEM.

THE conchs of various sorts and colours
 come from the East-Indies and Red Sea :
 the porcelains, cassanders, the dolia, the buc-
 cinums, the cornets and the cylinders are all
 naturally polished; but a great number of
 very curious shells, such as the tiara, the
 plume, the rhombus, the onyx, the violet
 shell, the auris marina, the nautilus, the bur-
 gau, the limpits and asses ears, generally
 come from the sea in a rough state, some
 more incrusted than others, so that they re-
 quire to be polished up to let their beauties
 appear; and as a great many ladies have a
 taste

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taste for curious shells, they will please to observe the following directions.

A shell which hath a smooth surface, and a natural dull polish, need only be rubbed with the hand, or with a piece of shamoy leather, with some tripoli or rot stone, and it will become a perfectly bright and fine polish.

A shell that is rough, foul, and crusty, or covered with a tartareous coat, must be left a whole day steeping in hot water; when it has imbibed a large quantity of this, it is to be rubbed with rough emery on a stick, or with the blade of a knife, in order to get off the coat; after this it may be dipped in diluted aquafortis, spirit of salt, or any other acid; and after remaining a few moments in it, be again plunged into common water: this will greatly add to the speed of the work; after this, it is to be well rubbed with linen cloth impregnated with common soap; and when by these several means it is made perfectly clean, the polishing is to be finished with fine emery and a hair brush; if after this the shell, when dry, appears not to have so good a polish as was desired, it must be rubbed over with a solution of gum arabic; and this will add greatly to its gloss without doing it any sort of injury; the gum water must not be too thick, and then it gives no sensible coat, only heightening the colours.

The white of an egg answers this purpose also very well, but is subject to turn yellow;

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if the shell has an epidermis, which will by no means admit the above method of polishing it, it is to be dipped several times in diluted aquafortis, that this may be eaten off; and then the shell is to be polished in the usual way with putty, fine emery, or tripoli, on the hair of a fine brush: when it is only a pellicle that hides the colours, the shells must be steeped in hot water, and after that the skin worked off by degrees with an old file.

This is the case with several of the cylinders, which have not the natural polish of the rest.

When a shell is covered with a thick and greasy epidermis, as is the case with several of the mussels, and tellinæ, in this case, aquafortis will do no service, as it will not touch the skin; then a rough brush and coarse emery are to be used; and if this does not succeed, seal-skin, or, as the workmen call it, fish-skin, and pumice-stone are to be taken in to assist.

When a shell has a thick crust, which will not give way to any of these means, the only way left is to plunge it several times into strong aquafortis, till the stubborn crust is fully eroded. The limpit, *auris marina*, the helmet shells, and several other species are of this kind, and must have this sort of management; but as the design is to shew the hidden beauties under the crust, and not to destroy the natural beauty and polish of the inside of the shell, the method of using the aquafortis must be this, a long piece of wax must be provided,

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vided, and one end of it made perfectly to cover the whole mouth of the shell; the other end then will serve as a handle, and the mouth being stopped by the wax, the liquor cannot get into the inside to spoil it; then there must be placed on a table, a vessel full of aquafortis, and another filled with common water.

The shell is to be plunged into the aquafortis, and after remaining a few minutes in it, is to be taken out and plunged into the common water. The progress the aquafortis makes in eroding the surface, is then to be carefully observed every time it is taken out; the point of the shell, and any other tender parts, are to be covered with wax, to prevent the aquafortis from eating them away; and if there be any worm holes, they also must be stopped up with wax, otherwise the aquafortis would soon eat through those places.

When the repeated dippings into the aquafortis shew that the coat is sufficiently eaten away, then the shell is to be wrought carefully with fine emery and a brush; and when it is polished as high as can be by this means it must be wiped clean, and rubbed over with gum-water or the white of an egg. In this sort of work, the operator must always have the caution to wear gloves, otherwise the least touch of the aquafortis will burn the fingers and turn them yellow; and often, if it is not regarded, will eat off the skin and nails.

These

These are the methods to be used with shells, which require but a moderate quantity of the surface taken off; but there are others which require being scaled; so these must be delivered to the work-man to be done on the wheel.

The Persian shell, jonquil, chama, the tortoise-shell, limpit, the tellinæ and cochleæ, and various other species, when polished from their coarse state as they come out of the sea, produce great variety of beauties, and are justly esteemed by the curious.

FOR SHELL-WORK.

Various sorts of flowers may be formed from shells: for this work the purest are the best, and they may be made up either from nature or patterns; and as few can purchase foreign shells, there may be very beautiful flowers made of our own country shells, which are found on the beach near Aberdeen, St. Andrews, and other places on the coast; even the coarsest shells may be made very pretty for grotto-work, by cleaning them with the spirit of salt, and varnishing them afterwards with fine gum-arabic. As the shells of this country are generally white, to make them appear like the foreign, take chips of Brasil-wood, and steep it among strong gum; then, with a fine pencil, do it over your shells, and they will be very clear and beautiful; do them in three different shades for roses, always putting the darkest in the middle, with knotted yellow

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silk for the hearts ; roses, auriculas, blossoms, anemonies, and polianthos, must be done with strong gum upon cards ; gilliflowers, tulips, narcissus must be in wax, and husks made of green vellum or paper ; wire for stalks, covered with green silk, as the gum-flowers are.

Shell-flowers, when properly made, make very beautiful festoons, brackets, picture-frames, &c. As festoons require such a quantity of leaves, and vellum being expensive, you may use green paper.

ARTIFICIAL CORAL FOR GROTTOWORK.

Take clear rosin dissolved in a brass pan ; to one ounce add two drachms of fine vermilion ; when you have stirred them well together, have your branches or twigs peeled and dried, and paint them over with a pencil while your composition is hot, and shape them in imitation of nature ; the black thorn is properest for doing it on ; then hold it over a gentle fire ; turn it about, and it will make it all over smooth and even, as if it were polished : you may make white coral with white lead, and black with lamb black : you may make a grotto to your taste of these things, with a variety of shells, pebbles, petrifications, moss, ore, and glass. The hill of Kinnoul, near Perth, produces a variety of pebbles, stones, and rock-chrystal, which shoot up naturally like white sugar-candy, and are very proper for making up the floor of a grotto, by laying a square of red tyle, and filling up the next with pebbles of different colours.

DESCRIPTION

DESCRIPTION OF SOME CURIOUS SHELLS.

The following are reckoned the finest, and rarest shells, viz. The PAPAL CROWN, which takes its name from its form, and which is all streaked with red on a white ground.—The FEATHER, whose whiteness with its carnation stains, have an admirable effect.—The HEBRAICA, which, on a ground as white as snow, has spots as black as jet, much resembling Hebrew characters.—The CHINESE SNAIL, which has a green and black embroidery on a dark brown ground.—The CLOTH of GOLD, remarkable for an admirable tissue of yellow, brown and black.—The CLOTH of SILVER, which does not come behind that of Gold in beauty.—The LEOPARD, which is all speckled.—The TIGER, whose spots exceed those of the Leopard.—The HARTS-HORN, which has black stains on a white ground.—The PURSE, thus called from its figure; it is embroidered with three or four colours.—The SUN DIAL, the CATERPILLAR, both denominated from their forms.—And the NERITES, white NAUTILUS, LEPAS, LEPARIA, APORAYS, TUBA, GALEA, &c. all exhibiting various beauties.

A GOOD STONE-GLUE OR CEMENT FOR
GROTTO-WORK.

Take two parts of white rosin melted clear; add to it four parts of bees-wax; when melt-

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ed together, add stone-flour of the stone you are to cement, two or three parts ; then one part flour of sulphur ; incorporate all together over a gentle fire, and then knead it with your hands in warm water.

A DESCRIPTION OF SOME BEAUTIFUL SHELLS TO BE SEEN IN THE CABINETS AND GROTTOS OF THE CURIOUS.

The *Sea Trumpet* is, in its perfect state, nine inches long, an inch and a half diameter at its mouth or irregular lip, and the opening at the small end about half an inch : the surface is a beautiful brown, prettily spotted with white ; and the pipe has fourteen annular ridges that are a little elevated, and of a fine purple colour.

The *Admiral* is vastly beautiful ; a volute two inches and a half long, and an inch in diameter at the head, from whence it decreases to a cone with an obtuse point : the ground colour is the brightest elegant yellow, finer than that of Siena marble ; and this ground so variegated with the brightest colours, that a little more than the third part of the ground is seen ; broad fasciæ, the most charmingly veined surround it, and the clavicle is the most elegant of objects in colours, brightness and irregularities ; there is a punctuated line of variations that runs in the centre of the yellow fasciæ, and is wonderfully pretty. This beautiful East Indian sells at a great price.

The

The *Crown Imperial* is likewise very beautiful; the voluta is four inches long, two in diameter at the top, and its head adorned with a charming series of fine tubercles pointed at the extremities: the ground is a clear pale, and near the head and extremity of the shell, two very beautiful zones run round; they are of the brightest yellow, in a manner the most elegant, and are variegated with black and white purple. It is an East Indian.

The *Hebrew Letter*, another voluta, is a fine curiosity; it is two inches in length, and an inch and a quarter in diameter at the top; it is a regular conic figure, and its exerted clavicle has several volutions: the ground is like the white of a fine pearl, and the body all over variegated with irregular marks of black, which have a near resemblance of the Hebrew characters. This elegant shell is an East Indian.

The *White Voluta*, with brown, blue, and purple spots: this very elegant shell, whose ground is a charming white, is found on the coast of Guinea, from five to six inches in length, and its diameter at the head, often three inches: it tapers gradually, and at the extremity is large and obtuse; its variegations in its spots are very beautiful, which are principally disposed in many circles round the shell.

The *Butterfly* is a voluta the most elegant of this beautiful genus; its length is five inches in its perfection, and two and a half broad at the head; the body is an obtuse cone; the

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clavicle is pointed, and in several volutions the ground is the finest yellow, and beautified all over with small brown spots, in a regular and round series: their variegations are exceeding pretty, and as this rare East Indian shell has, besides these beauties, three charming bands round the body, which are formed of large spots of a deep brown, a pale brown and white, and resemble the spots on the wings of butterflies; it is a beautiful species indeed. The animal that inhabits this shell is a limax.

The *Tulip Cylinder* is a very scarce and beautiful native of the East Indies, and, in its state of perfection and brightness of colour, of great value: its form is cylindric, its length four inches, and its diameter two and a half and its greatest increase; its clavicle has many volutions, and terminates in an obtuse point: the ground colour is white, and its variegation blue and brown; they are thrown into irregular clouds in the most beautiful manner, and into some larger and smaller spots. The limax inhabits this fine shell.

The *Thorny Woodcock* is ventricose, and approaches to an oval figure; its length full grown is five inches, the clavicle short, but its volutions distinct, and its rostrum from the mouth twice the length of the rest of the shell; this snout and the body have four series of spines, generally an inch and a half long, pointed at the ends, and somewhat crooked;

crooked ; the spines lye in a regular, longitudinal series ; the mouth is almost round, but the opening is continued in the form of a slit up the rostrum : the colour of this American and extremely elegant shell, is a tawny yellow, with a fine mixture of a lively brown, and by bleaching on the coasts, it gets many spots of white.

The beautiful *Harp* is a Chinese, three inches and a half long, and two and a half in diameter : the shell is turned and inflated, and at the head largest ; it has an oblong clavicle in several volutions, pointed at the extremity, and the other extreme is a short rostrum : the whole surface is ornamented with elevated ribs, that are about twice as thick as a straw, and as distant from each other as the thickness of four straws ; the colour is a fine deep brown, variegated with white and a paler brown, in a manner surprisngly beautiful.

The extremely elegant *Argus* is from the coast of Africa, and is sometimes found in the East Indies ; its length, in a state of perfection, is four inches and a half, its diameter three ; it is oblong and gibbous, has a wide mouth, and lips so continued beyond the verge, as to form at each extremity a broad and short back : the colour is a fine pale yellow, and over the body are three brown fasciæ ; but the whole surface, and these fasciæ, are ornamented with multitudes of the most beautiful round spots, which resemble eyes in the wings

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wings of the finest butterflies : the limax inhabits this charming shell ; this creature is the sea snail.

The *Concha* of *Venus* is three inches long and two and a half in diameter ; the valves are convex, and in a longitudinal direction deeply striated ; the hidge at the prominent end is large and beautifully wrought, and the opening of the shell is covered with the most elegant wrinkled lips, of the most beautiful red colour, finely intermixed with white ; these lips do not unite in the middle, but have slender and beautiful spines round about the truncated ends of the shell : the Shell of *Venus* is an American, and valued by the collectors at a high rate

But of all these curious shells, the *Hammer Oyster* is most to be wondered at ; it is the most extraordinary shell in the world ; it resembles a pick-axe with a very short handle and a long head ; the body of the shell is the place of the handle of the instrument, and is four inches and a half long, and one inch and a half in diameter ; what answers for the head of the pick-axe, is seven inches long, and three-quarters of an inch in diameter ; this head terminates at each end in a narrow obtuse point, is uneven at the edges, irregular in its make, and lies cross-ways to the body ; yet the valves shut in the closest and most elegant manner ; the edges are deeply furrowed and plated, and the lines run in irregular directions ; the colour without

without is a fine mixture of brown and purple, and within a pearly white, with a tinge of purple. This rare shell is an East Indian, and whenever it appears at an auction, is rated very high; sometimes one will give ten guineas.

TO MAKE GLASS JARS, AND OTHER PIECES
OF ORNAMENT, LOOK LIKE CHINA.

After you have painted your figures, cut them out, so that none of the white remain; then take some thick gum-arabic; go over all your figures, and place them on your glass to your own taste; let them stand to dry for twenty-four hours; then clean them well with a wet cloth betwixt the prints, and let them stand a few hours longer, least the water should move any of the edges; then take white wax, and flake white, ground very fine, and melt them together: with a japanning-brush go over all your glass above the prints; done in this manner they will hold water: or you may boil isinglass to a strong jelly, and mix it up with white lead ground fine, and lay it on in the same manner; or you may do them with nut-oil and flake white: For a Blue ground, do it with white wax and Prussian blue, ground fine; for Red, wax and vermilion, or carmine; for Green, wax and verdegrease; for a Chocolate colour, wax and burnt umber.

LANDSCAPES.

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L A N D S C A P E S.

In drawing landscapes, always express a far horizon, shewing the heavens cloudy or clear more or less according to the occasion ; and if you express the sun, let it be either as rising or setting, and as it were behind, or over some hill or mountain : the moon and stars are seldom or never expressed, unless it be in representations of moon-light or twilight ; because all things are supposed to be seen by day.

Take great care to augment or lessen every object, proportionably to it's distance from the eye ; and also to express them stronger or weaker. In delineating objects at a great distance, as 10, 20, or 30 miles off, when it is difficult to be discerned whether it be a temple, castle, house, or the like, be careful to express them in the same faint and confused manner, as they really appear to the eye.

If the landscapes are drawn in colours, the farther you go, the more you must heighten with a thin and airy blue, to make it appear as if farther off, beginning at first with a dark green, and lightening it by degrees into a blue, according to the distance.

Let your landscape be always conformable to the season it is intended to represent : as if you intend it for a winter-piece, express the felling of woods, sliding on the ice, fowling, hunting of foxes in the snow ; making the trees every where either naked, or loaden with snow,

snow, or an hoar-frost ; the earth bare without greenness, flowers or cattle ; the air thick or heavy, the water frozen, with carts passing over it, boys sliding on it, &c.

Let every site have its proper adjuncts or additional graces, as the farm-house, wind-mill, woods, cattle, travellers, ruins of temples, castles, and monuments ; with a thousand other things of the same kind, as they become properly parts of the view you intend to represent.

L I M N I N G,

Is the art of painting in water colours, and stands contra-distinguished from painting, properly so called, which is done in oil colours.

In limning all the usual colours are proper enough, excepting the white made of lime, which is only used in fresco ; but the azure and ultra-marine must always be mixed up with size, or with gum, as the yolks of eggs always give yellow colours a greenish tincture.

But there are always applied two lays of hot size, before the colours, mixed even with size, are laid on : the composition made with eggs and the juice of the fig-tree, being only used for touching up and finishing, and to prevent the necessity of having a fire always at hand to keep the size hot ; yet it is certain, that the size colours hold the best, and accordingly are always used in cartoons, &c. This size is made of shreds of leather.

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The linen proper for painting on, should be old, half worn and closs; this they stain with white lead, or a fine plaister, beaten with size, which, once dry, they go over with a layer of the same size.

The colours are all ground in water, each by itself, and, in proportion as they are required in working, are diluted with size-water. If the yolks of eggs are designed, they dilute them with water made of equal quantities of common water and vinegar, with the yolk white, and shell of an egg, well beaten, and then with varnish: this, however, is only to preserve it from the wet; for the great advantage of limning consists in its being without gloss, that all its colours, then void of lustre, may be seen in all kinds of lights, which colours in oil, or covered with varnish cannot

ON THE NATURE AND SIGNIFICATION OF COLOURS.

As Ladies who sit for their pictures may be desirous of knowing the nature and signification of colours, in order to the choosing their drapery, they are as follows:

WHITE, signifies innocency, purity, truth, and integrity.

AZURE, signifies constancy.

VIOLET-COLOUR, signifies a religious mind.

PURPLE, signifies fortitude.

BLUE, signifies faith and love.

BLACK, wisdom, sobriety, and mourning.

RED

RED, justice, virtue, and defence.
 FLAME-COLOUR, beauty.
 MAIDENS-BLUSH, envy.
 CARNATION, craft, subtilty, and deceit.
 GREEN, hope.
 GRASS-GREEN, youth, and rejoicing.
 YELLOW, jealousy.
 GOLD-COLOUR, avarice.
 STRAW-COLOUR, plenty.
 TAWNEY, forsaken.
 WILLOW, forsaken.



OBSERVATIONS ON EMBROIDERY.

I remember in the early part of my life to have visited a lady, who had the arms of her family embroidered with silver on blue damask, on the bottom of each of her drawing-room chairs, which she esteemed of more value than any other furniture she was in possession of.—There is scarce any work we read of so ancient as embroidery—in holy writ we find that the Almighty ordered the curtains of the tabernacle to be done with that work.—More than three thousand years ago, at the siege of Troy, the breast-plates and shields of the warriors were made of leather, on which were embroidered, or painted, different devices : That of Hector's we are told was fable, two lions combatant. It should seem that from hence the term *coat of arms* has originated, as the embroidery was done on their outward coats, &c. which covered their arms, &c.

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Alexander the Great who lived 348 years before Christ, bore a lion rampant, and caused his soldiers to bear the same also embroidered on their shields, as marks of their honourable achievements.

These signs, which we call arms, were originally considered as manifesting, in some sort, the quality of the bearer : and as they were of great dignity and estimation, so they were not bestowed on the vulgar.——As needle-work was never more in fashion, and as most families have their arms on their carriages, would it not be worthy the attention of the ladies to embroider furniture with the same, which with care would last many generations? There is yet in Scotland numbers of beds, chairs, &c. work'd by that unfortunate lady, Mary Queen of Scots, and her maids of honour, which are as fresh as if newly done. When I mention these things, I have in view people of fortune only ; but even people in a middling situation, who live in the country, and have much leisure, might employ themselves agreeably and usefully, either in working articles of dress, with silk or worsted, or in many pretty things to ornament their houses. By what remains of works of this kind in several families, we may discover how much it was the taste about half a century ago ; nor can I account for its being neglected such a number of years, unless it is by considering that girls from eight to twelve years of age were generally employed

in this kind of work, and often placed with school-mistresses who were ignorant of just proportion, and knew nothing of a proper distribution of light and shade; so that embroidery fell into disrepute, as it rather hurt than pleased the eye: for there is nothing more common than to see in pieces of work of this kind, roses, anemonies, auriculas, &c. all on one stalk or stem; and in the landscape way, to see a butterfly as large as a bull.

Ladies who have not a genius for drawing or painting, may procure good patterns, and clap them on a pane of glass in the window, placing a sheet of fine paper above it, and with a black lead pencil trace all the outlines, which done prick it with a fine needle, then place it on the silk or cloth you intend to draw; powder a little coal, or wood burnt to coal, very fine, put it in a piece of thin cloth, and pounce it thro' the holes of your pattern, and you will have the figure compleat; draw it with gunpowder beat fine and mixed with milk; as blue, &c. is difficult to wash out.

OF EMBLEMS.

In pieces of work where large figures are requisite such as animals, vegetables, &c. it may be proper to consider the emblematic sense in which they are frequently used.

VEGETABLES.

The PALM-TREE is the emblem of victory, justice and peace,—for all victorious Princes in old times, returning from battle and mighty enterprizes, bore palms in their triumphs; and the Royal Psalmist saith, “the righteous shall flourish as the Palm-tree,” which is to be understood for ever.

The OLIVE-TREE is an emblem of peace, concord, and obedience. The Dove brought a branch of this tree to Noah while in the Ark, as a token of peace and reconciliation between God and Man.

The LAUREL is an emblem of triumph and victory.

The OAK is an emblem of virtue, force, strength, and long life.

The CYPRESS and PINE, (among the Egyptians) were the symbols of death and oblivion; because when once cut or lopped, they never sprout again.

The POMEGRANATE is a symbol of royalty, being crowned on the top; and also signifies amity.

The ORANGE is the symbol of dissimulation.

A SHEAF of CORN denotes plenty, a love of hospitality, friendship, fortitude, and is a type of the resurrection.

The ROSE, which is of great use in chaplets and garlands, the white being the emblem of purity and love, and the red of beauty and grace.

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grace. White and red are beauty's chief elements.

The LILY is an emblem of purity and chastity; and the ensign of the blessed Virgin; also the ornament royal and princely flower in the crown of King Solomon; representing love with perfect charity.

The TREFOIL is the leaf of an honey-suckle, and is an emblem of perpetuity, signifying that the just man shall never wither.

The PRIMROSE, of all other flowers brings good tidings to man, that the spring of the year is at hand.

OF BIRDS.

The SWAN is called Apollo's bird, not only for his colour, which is the emblem of sincerity, but because he is said to despise death, as all good men ought to do; his strength is said to lie in his wings, and he singeth at his death, as the end of all calamities.

The DOVE is mild and meek, clean of kind, plenteous in increase, forgetful of wrongs, for when their young ones are taken from them they mourn not.

The PELICAN was of such esteem with the Egyptians that they held it as an hieroglyphick of the duties of parents to children, viz. education, instruction, and good example.

The SWALLOW is the messenger of good news, that the spring is at hand.

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Pliny writes that the Cock is the royal bird that is, for nature hath crowned him with a perpetual diadem to him and his posterity for ever; and he will rather die than yield to his adversary; for if he be vanquished he shunneth the light and society of men; but if he become victor, then he croweth as a testimony of his conquest.

The EAGLE is accounted the king of birds, and it is said he eateth not his prey alone but giveth part thereof unto other birds that follow him, whom he procures as his guests. It is remarked that the old Eagles make a proof of their young, by exposing them against the sun beams; and such as cannot behold that brightness, are cast forth as unworthy to be acknowledged their offspring.

The RAVEN is said to delight so much in her own beauty, that when her young ones are hatched, she will give them no meat till she sees that they are of her own colour; and Job asking the question, Who provided for the young Ravens? St. Augustine answered, That they were fed with the dew of heaven while they were naked.—The Raven is said to have sixty-four sundry changes of his voice, and is very guileful, for he will both steal and hide, and is so far the Fox's friend, that he will fight his quarrels.

The

The four Evangelists are usually represented with emblems, viz. St. Matthew with a child, as beginning his gospel with the nativity of our Lord and Saviour. St. Mark with a Lion, as he begins his gospel, with the voice of one crying in the wilderness. St. Luke with a bullock, as he begins his gospel with the birth of John the Baptist, whose father, being a High-priest, was accustomed to offer those creatures. St. John with an Eagle on his head, he beginning his gospel with the divinity of our Lord, soars higher than the three former, as an Eagle flies higher than any other bird.

There is nothing more common than for both English and Scotch, when absent from their own country, to employ the Ladies in sewing them crosses, the St. George for England, and St. Andrew for Scotland. As many of my female readers may not understand the meaning of those days being observed, the following account of them from an eminent author, will I doubt not, be acceptable.

THE MOST NOBLE AND ILLUSTRIOUS ORDER
OF THE GEORGE AND GARTER.

If we consider the nobleness of the personages that have been inrolled therein, it excels all other institutions of honour in the world, and owes its origin, as is confessed
on

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on all hands, to Edward King of England, and France; the chief occasion being as follows. King Edward being a person of consummate virtue, gave himself up to military affairs, making St. George the martyr, who was a man of great renown for chevalry, his patron; being engaged in war, for recovering his rights from France, to restore King Arthur's Round Table, and for that purpose invited hither the gallant spirits from abroad; to endear himself to whom, he, upon new-year's day, *anno dom.* 1344, issued out letters of protection for the safe going and returning of foreign Knights, to try their valour, at solemn Joust, to be held at Windsor, on the 19th of January ensuing, where he provided a great supper to begin the solemnity, and then ordained this festival to be annually at Whitsuntide; for which purpose he erected a particular building in the castle, wherein he placed a table of 200 feet diameter, and thereat entertained the Knights at his own expence. About three years after he issued out a Garter for a signal of a battle that was crowned with success, (which is conceived to be the battle of Cressley) where he took the French King prisoner, and brought him to England: on so remarkable a victory, he took occasion to institute this order, giving the Garter pre-eminence amongst its ensigns, whence the select number, whom he incorporated into a fraternity, were styled Esquires, viz. Knights of the Garter,

ter, an order of companionship, illustrated with eight Emperors of Germany, three Kings of Spain, five Kings of France, two Kings of Scotland, five Kings of Denmark, two Kings of Portugal, one King of Poland, two Kings of Naples, and one King of Arragon; Princes, Dukes, Earls, Lords, not to be numbered.

The habit of this most noble order of the George and Garter, which are eminently distinguishable and magnificent, consists of these particulars, viz. Garter, hood, mantle, surcoat, George and collar; the first four were assigned by the founder, and the George and collar, by King Henry the Eighth; and all those together are called the whole habit or ensigns of the order.

The Royal Garter challengeth the pre-eminence, by reason of the noble order from which it is denominated; it is the first part of the habit presented to foreign Princes, and absent Knights, who, and all other Knights elect, are therewith first adorned, and it is of such great honour and grandeur, that by the bare investure with this noble ensign, the Knights are esteemed companions of the greatest military order in the world.

This noble ensign, the Garter, which is worn on the left leg, between the knee and calf, was so instituted by the founder, at the erection of the order, and was to put them in mind that as by their order, they were joined in a firm league of amity and concord, so by
their

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their Garter, as by a fast tye of affection, they were obliged to love one another: and now, least this strict combination might seem to have any other aim or end, than what was honourable and just; as to the King's obtaining his kingdom of France, &c. he caused to be enamelled on the said Garter this motto, *Honi soit qui mal y pense*, retorting shame upon him that should dare to think amiss of so just an enterprise; and signifying that the magnanimity and bravery of those Knights, whom he had elected into this order, was such as would impower and enable them to maintain the quarrel against all that thought ill of them.

The materials whereof the Garter was composed for King Charles the Second, were blue velvet, bordered with gold wire, the letters of the motto, and the stops, rose and table diamonds (the whole containing 250); the hinge of the buckler was gold, whereon was the Sovereign's picture to the breast, crowned with a laurel; on the backside of the pendent was engraved St. George on horseback encountering a Dragon.

When the Sovereign designs to elect a companion into this most illustrious order, the Chancellor belonging to the said order, draws up the letter, which passing both under the Sovereign's sign manual, and the signet of the order, is sent to the person by Garter, Principal King at Arms, and is in this manner, or to the same effect,

“ We

"We, with the companions of our most noble order of the Garter, assembled in chapter, holden this present day, at our castle of Windsor, considering the virtuous fidelity you have shewn, and the honourable exploits you have done in our service, by vindicating, and maintaining our just rights, &c. have elected and chosen you one of the companions of our order, therefore we require you to make your speedy repair unto us, to receive the ensigns thereof, and be ready for your installation, upon the day of this present month, &c."

The Garter, which as aforesaid, is of blue velvet, bordered with gold, (having commonly the motto of the same) is buckled upon the leg at the time of the election, with this ceremony.

"To the honour of God omnipotent, and in memorial of the blessed martyr, St. George, tie about thy leg for thy renown, this noble Garter, wear it as a symbol of the most illustrious order, never to be forgotten or laid aside, that thereby thou mayest be admonished to be courageous, and having undertaken a just war, in which thou shalt be engaged, thou mayest stand firm, valiently fight, and successfully conquer."

The Princely Garter being buckled on, and the words of its signification pronounced, the elect Knight is brought before the Sovereign, who puts about his neck a sky-coloured ribbon, whereunto is appendent, wrought in gold,

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gold, within the Garter, the image of St. George on horse-back, with his sword drawn incountering the Dragon.

“Wear this ribbon about thy neck, adorned with the image of the blessed martyr, and soldier of Christ, St. George, by whose imitation provoked, thou mayest so overpass both prosperous and adverse adventures, thou having stoutly vanquished thy enemies, both of body and soul, thou mayest not only receive the praise of this transient combat, but be crowned with the palm of eternal victory.”

OF THE ORDER OF ST. ANDREW, OR THE THISTLE, IN SCOTLAND.

It is reported by John Lesly, Bishop of Ross, that this order took its beginning from a bright cross that appeared in the heavens in the form of that whereon St. Andrew suffered martyrdom, which said cross appearing in the year 810 to Hungro King of the Picts (and to the Scots whom Achaius King of Scotland sent to their assistance) the night preceding the battle with Athelstan King of England, over whom they prevailed, they went to the church of St. Andrew, in the town now so called, in solemn procession, to thank God and his saints for their victory; vowing for themselves and their posterity, ever to use the figure of that cross in their ensigns and banners, and the number of this order (consisting of thirteen) is in allusion to our Saviour and the twelve apostles.

As

As to the time when this order began there is no mention, but it was refined by King James the Fifth, who being honoured with the Garter from England, the Toison d' Or from the Emperor, and St. Michael from France, celebrated the festivals of them all; and setting up their several arms with their orders about them, over the gates of Linlithgow, erected his own, with the order of St. Andrew, in the midst of them; the particular ensigns whereof are the said Saint with his cross, the collar, star, and ribband, all exactly formed.

The collar which the Knights of St. Andrew wear upon the day of their grand feast, and other extraordinary occasions, is of gold, fashioned into a thistle, and sprigs of rue enamelled vert, appendant to which is the image of St. Andrew, also in gold, bearing the cross before him; and the habit is their Parliament robes, on the left breast whereof is a cross surmounted by a star of four points, all of silver, adorned with green, a roundle bordered with gold, and letters of the same; containing this motto, *Nemo me impune lacessit*, 'No man provokes me without hurt'; and in the center is the thistle proper, to which the motto alludes. Note, that beside the star, &c. which these Knights wear with their collars, and at all other times, they wear (as another common ensign) a green ribband, over the left shoulder, after the manner of the Knights of the Garter, appendant to which is St. Andrew

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drew and his cross in a circle of gold, enamelled and lettered as the roundle under the stars but sometimes they wear, encircled after the same manner, a thistle crowned with an imperial crown.

MOSAIC-WORK.

Get a sufficient quantity of pieces of glass of all colours, and some gilded and silvered, prepared for this work by the glass-men; then you may proceed either on a floor or wall: first form a draught of your picture, and having chalked the lines, transfer the same to the plaister, (as in fresco). As this plaister is to be laid thick on the wall, it will continue fresh and soft a considerable time, so that there may be enough prepared at once to serve three or four days; it is composed of lime made of hard stone, with brick dust very fine, gum-tragacanth and white of eggs; when it is thus prepared, and laid on the wall, and the design finished of what is to be represented, have your pieces of glass all in separate cases according to their colours, and with pliers take them out and range them one after another, still keeping strictly to the light shadow, different tints and colours represented in the design, pressing or flattening them down with a rubber, which serves both to sink them within the ground and to render the surface even.

The more time and trouble you take, the work will still appear more beautiful, as the
pieces

pieces of glass are uniform and ranged at more equal heights.

Some of these are executed with so much justness, that they appear as smooth as a table of marble, and as finished and masterly as a painting in fresco; with this advantage, that they have a fine lustre, and will hold almost for ever.

The finest works of this kind that have descended to us, are those whereon the moderns have retrieved the art almost lost; viz. those of the church of St. Agnes, formerly the temple of Bacchus at Rome; besides some at Pirce, Florence, and other cities of Italy. The most esteemed among the works of the moderns, are those of Joseph Pine, and the Chevalier Lanfranc, in the church of St. Peter at Rome: there are very good ones likewise at Venice.

— PAINTING IN FRESCO.

This manner of painting is performed on walls and ceilings, newly plaistered with lime and sand; the plaister is only to be laid in proportion as the painting goes on; no more being to be done at once, than the painter can dispatch in a day, while it is dry; before he begins to paint, a cartoon or design is usually made on paper, to be chalked and transferred to the wall about half an hour after the plaister is applied. In this kind of painting, all the compound and artificial colours, and almost all

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the mineral are set aside, and scarce any thing used but earths, which are capable of preserving their colours, defending it from the burning of the lime, and resisting its salts. For the work to come out in all its beauty, the colours must be laid on quick, while the plaister is yet moist; nor must they ever be retouched dry, with colours mixed up with the white of an egg, size or gum, as some workmen do, by reason such colours grow blackish; nor do any preserve themselves, but such as were laid on hastily at first: the colours used are white made of lime slacked long ago, and white marble-dust, oaker, both red and yellow, violet red, verditer, lapis lazuli, smalt, earth black, &c. all which must be ground, and worked up with water only, and most of them grow brighter and brighter as the fresco dries.

TO MAKE SHELL-GOLD.

Take the paring of leaf gold, or even the leaves themselves, and reduce them into an impalpable powder, by grinding them on a marble with honey; after leaving it to infuse sometime in aquafortis, put it in shells, where it will stick and dry; when you want to use it, dilute it with gum-water.

N. B. Shell-silver is made the same way.

TO

TO MAKE CARMINE.

Take a pound of the best rasped Brasil-wood, and steep it for three or four days in a sufficient quantity of white-wine vinegar; after that boil it for half an hour; strain it through a strong piece of linen, and put it again over the fire; you must likewise dissolve by itself eight ounces of allum, in a sufficient quantity of white wine vinegar; mix both liquors together by stirring them in a mortar, and there will arise a froth, which is the carmine; skim it off, dry it, and keep it for use. Cochineal or red saunders may be used instead of Brasil-wood.

G I L D I N G.

Size for gilding, is yellow oaker ground fine with water, and laid to dry on a chalk-stone; then ground up with a due proportion of fat drying oil, to give it the body, or degree of stiffness required; with this size they wash over the thing to be gilt, with a brush or large pencil; and when almost dry, but wet enough to retain the gold, they spread the gold leaves thereon, either whole or cut in pieces. To take up and apply the leaves, they make use of a piece of fine, soft, well carded cotton, or of a pallet for the purpose, or barely the knife wherewith the leaves were cut, according to the part of the work they are to gilt, or the breadth of the gold to be applied: in proportion as the gold is laid, they press it

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down smooth with a bunch of cotton, or a hare's foot, to make it stick, and as it were incorporate with the ground: with the same hare's foot, or a hair pencil, they mend any cracks that may happen. This method of gilding will stand all weathers.

GILDING IN WATER-SIZE.

For stucco, frames, &c. the size is made of shreds of glove leather boiled in water, to the consistence of a jelly; the wood to be gilded first gets a wash of this size, boiling hot; when this is dry, another of whitening, mixt up with the same size. For this whitening, some use plaister of Paris, well beaten and sifted; others Spanish white; it is laid on with a stiff brush, and oftener or seldomer repeated, according to the nature of the work; for pieces of sculpture and deep carving, seven or eight lays suffice; for flat or smooth work, ten or twelve: In the latter case, they are applied by drawing the brush or pencil over the work; in the former, by daubing it smartly on, that the size may enter all the dints of the carving. When the whole is dry, they moisten it with fair water, and rub it over with several pieces of coarse linen, if it be a flat; otherwise they beat or switch it with several slips of the same linen tied to little sticks, to make it follow and enter into all the cavities and depressures thereof.

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The white thus finished, they proceed to yellow it, observing, that if it be a piece of sculpture or in relievo, they first touch up and repair the several parts which the white ground may have disfigured with little iron instruments, as gravers and chissels.

The yellow which they use, is only common oaker, well ground and sifted, and then mixed up with the size used for the white, only weaker by one half; this colour is laid on hot, and, in works of sculpture, serves to supply the place of gold, which frequently cannot be carried into all the cavities and dintings of foliages and other ornaments.

Over this yellow is applied a lay, which is to serve for the ground whereon the gold is to be immediately laid; it is usually composed of the Armenian coal, blood-stone, black-lead, and a little fat, to which some add soap and olive-oil; others burnt bread, bistre, antimony, tin-glass, butter and sugar-candy; these ingredients being all ground together with hot size, they apply three lays of the composition upon the yellow, each after the other is dried, taking care not to put any in the small cavities of the work to hide the yellow: The brush used in this application, is to be soft; and when the matter is well dried, they go over it with a stronger brush to rub it down, and take off the little prominent grains; and then facilitate the burnishing of the gold.

In

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In order to proceed to gild, they must have three sorts of pencils, one to wet, another to touch up and amend, and a third to flatten: there is also requisite a cushion to spread the gold leaf on, when taken out of the book, a knife to cut them, and a hare's foot or squirrel's tail, fitted with a handle, or else a piece of cotton to take them up, direct and apply them.

They begin with the wetting pencils, by which they moisten the layer last laid on with water, that it may the better receive and retain the gold; the leaves are then laid on the cushion, and taken up, if whole, with the squirrel's tail; if in pieces, with the other instrument, or even the knife they are cut with, and laid and spread gently on the parts of the work, before moistened.

When the leaves happen to crack, and break in laying on, they make up the breaches with little pieces of leaf, taken up on the repairing pencil; and with the same pencil, or another somewhat bigger, they smooth the whole, pressing the gold into the dints where it could not so well be carried with the squirrel's tail. The work thus far got, when dry, remains either to be burnished or matted: to burnish it, is to smooth and polish it with a burnisher; which is usually a dog's or wolf's tooth, or a blood-stone, an agate or a pebble, fitted in a handle for the purpose.

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To mat, is to give it a light lick in the places not burnished, with the pencil dipp'd in size, wherein a little vermilion sometimes has been mixt; this helps to preserve and prevent its flaying when handled.

The last thing is to apply a vermeil or lacker, in all the little lines and cavities; and to stop and amend any little faults with shell-gold.

The composition here called vermeil, is made of gum gutta, vermilion, and a little of some ruddy brown colour, ground together with Venice varnish and oil of turpentine.

A COMPOSITION FOR GILDING BRASS OR SILVER.

Take two ounces of gum lacea, two ounces of karabe, succinum, or yellow amber, forty grains of dragon's blood in tears, half a drachm of saffron, and forty ounces of good spirit of wine; infuse and digest the whole in the usual manner; and afterwards strain it through a linen cloth; when the varnish is used, the piece of silver or brass must be heated before it is applied; by this means it will assume a gold colour, which is cleaned, when soiled, with a little warm water.

TO MAKE DIANA'S TREE.

Dissolve one drachm of pure silver in aqua-fortis, and to the solution add distilled vinegar and water, of each one ounce; filtrate the mixture, and add an ounce and a half of quick-silver;

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silver; mix and shake the whole some time in a round glass, the mouth of which being stopp'd with the finger; then set the whole to rest, and in four and twenty hours time it will shoot into branches of various figures.

TO PRESERVE BIRDS WITH THEIR ELEGANT PLUMAGE UNHURT.

When you get a bird fresh killed. open the venter, from the lower part of the breast-bone down to the anus, with a pair of fine-pointed scissars; take out all the intestines, liver, stomach, &c. fill up the cavity with the following mixture of salt and spice; and then bring the lips of the wound together, and stitch it up, so as to prevent the stuffing from falling out: the gullet, or passage, must then be filled from the back, down to where the stomach lay, with the same mixture (but finer ground) which must be forced down a little at a time, by the help of a quill or wire: open the head near the root of the tongue, with the scissars, and after having turned them round three or four times to destroy the brain, fill this cavity likewise with the mixture. You may leave the wings and thighs in their natural state, for the salt will soon penetrate into these parts; the bird must then be hung up for about two days by the legs; then it must be placed in a frame to dry, in the same attitude we usually see it when alive on the plain, or on a tree. In this frame it must be held up by two threads,

threads, the one passing from the anus to the lower part of the back, and the other through the eyes; the ends of these threads are to brace up the bird in its natural attitude, and fastened to the beam of the frame above: let the feet be fixed down with pins or small nails. In this situation it must remain for a month or more, until the bird is perfectly dry, which will be known by its stiffness; then it may be taken out of the frame and placed according to fancy, and it will require no other support than a pin through each foot, fastened into the box or bracket it stands on; the eyes must be supplied with proportionable glass beads, fixed in with strong gum-water. Common salt one ounce, allum powdered four ounces, pepper ground two ounces, all mixt together.

A VARNISH FOR PRESERVING INSECTS, FRUITS, &c.

Take one pound of rectified spirit of wine, and two ounces of white succinum; digest the whole in balneo mariæ during forty-eight hours; add thereto an ounce of white sandrac and white mastick, an ounce and an half of Venice turpentine; digest the whole in balneo mariæ, during twenty-four hours, to an entire dissolution: take out the intestines of the insects you have a mind to preserve; lay them for some days in rectified spirit of wine, mixed with clarified sugar-candy; afterwards besmear them with your varnish, till they are transparent

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transparent as glass; in this manner you will preserve them a long time.

This varnish succeeds equally with vegetables and fruits, which never rot or decay, when not affected by the exteriour air, as has been observed with regard to cherries, which are preserved perfectly well, by besmearing them with melted white wax.

FAN-MOUNTING.

Before you proceed to place the sticks, the paper must be plated in such a manner, as that the plates may be alternately inward and outward: it is in the middle of each plate, which is usually about an inch broad, that the sticks are to be pasted; which again, so as to be all joined and rivetted together at the other end, must be very thin, and scarce exceed one third of an inch in breadth; and when they are pasted to the paper, are still narrower, continuing thus to the extremity of the paper: the two outer ones are bigger and stronger than the others: the number of sticks seldom exceed twenty two; the painting may be gold leaf, applied on a silver ground, both prepared by the gold-beaters: sometimes they paint on a gold ground, but it is rarely, true gold being too dear, and false too paltry: to apply the silver leaves on the paper, they use a composition which they pretend is a great secret, but is no other than gum-arabic, sugar-candy, and a little honey melted in com-
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mon water, and mixt with a little brandy : this composition is laid on with a sponge ; then laying the silver leaves thereon, and pressing them gently down with a linen-ball stuffed with cotton, they catch hold and grow together : when, instead of silver, gold ground is laid, the same method is observed.

The ground being well dried, a number of the papers are well beaten together on a block, by which means the silver or gold gets a lustre as if they had been burnished.

TO CLEAN OIL PAINTINGS.

If smoaked, or very dirty, take stale urine and a little common salt ; rub them over with a woollen cloth dipt in that, till you think them quite clean ; then with a sponge wash them over with fair water ; then dry them and rub them over with a clean cloth : if your painting be not very dirty, rub them with smalt with a linen cloth ; then wash and dry them.

TO MAKE VARNISH FOR OIL PAINTINGS.

According to the number of your pictures, take the whites of the same number of eggs ; and to each picture take the bigness of a hazel-nut of white sugar-candy dissolved, and mix it with a tea-spoonful of brandy ; beat the whites of your eggs to a froth ; then let it settle ; take the clear, put to your brandy and sugar, and varnish over your pictures with it : this is much better than any other varnish, as it is

E easily

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easily washed off when your pictures want cleaning again.

WHITE VARNISH.

Is made with gum-sanderac and gum-mastick, dissolved in spirits, left to settle two days; then strained through a linen cloth, and after standing some time, the clear poured off and bottled for use.

LACE VARNISH.

Is made of gum-laeca and spirit of wine, frequently shaken till the gum be dissolved; then strained, and the clear decanted off as above: the lace ought to be of the kind called seed-lace;—though, for varnishing ordinary woods, shell-lace is often used.

A WHITE VARNISH.

Take ten ounces of rectified spirits of wine, two ounces of fine pulverized gum-sanderac, two ounces of Venice turpentine; put all together in a glass, and cover it close with waxed paper and a bladder; then take a pot with water and put it over the fire; when it begins to be warm, put a little hay at the bottom of the pot, and set your glass on it; let it boil three hours, and the sanderac and turpentine will dissolve and unite with the spirits; then strain your varnish boiling hot through a clean hair-cloth, and put it in a phial for use: all colours and gilding may be varnished with this.

OF COLOURS EXTRACTED FROM FLOWERS.

Prepare a sharp lye from pot-ashes or lime ; in this boil the flowers or leaves of single colours over a slow fire, till the tincture of the flower is quite extracted, which you may know by the leaves turning pale, and the lye of a fine colour ; put this lye into a well glazed pot or pan ; boil it with a little allum ; then pour the lye off into a pan with clear water, and you will see the colour precipitate to the bottom ; let it settle well ; then pour that water off and add fresh : repeat this till the tincture is intirely cleaned from the lye and allum ; the sediment is a fine cake ; which spread on linen cloth, and lay them on clean tiles in the shade to dry.

TO MAKE SAP-GREEN.

About a fortnight or three weeks before Michaelmas, take as many floes as you please ; mash them a little, and put them into a clean glazed pan ; sprinkle them well over with powdered allum, and let them stand in a hot place for twenty-four hours, and then pour upon them a clear lye ; put it upon the fire ; let it cool, and pour it through a cloth ; what comes through put up in a bladder, and hang it in the air to dry ; afterwards keep it always hanging in a dry place, or in the chimney corner, and when you have occasion to use it, take as much as you want, and dilute it with

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clear water ; if it should turn yellowish, put in a little indigo.

A FINE PURPLE.

Take a little cochineal and dissolve it in boiling water ; when cold, mix it up with gum-arabic.

TO PREPARE A BLUE COLOUR FROM VERDIGRISE.

Take sal-ammoniac and verdigrise, of each six ounces ; mix them well together with water of tartar into a paste ; put this into a phial, and stop it close ; let it stand for several days, and you will have a fine blue colour.

A FRENCH YELLOW,

May be made by boiling a little yellow-wood with allum in water ; when it settles, strain it off and add some gum-arabic.

TO MAKE WRITING INK.

Take five ounces of galls, six ounces of vitriol, four ounces of gum and a fresh egg ; a little powder of walnuts, four pints of beer, and put them into an earthen pot ; add a little sal-ammoniac to keep the mixture from moulding.

TO MAKE INVISIBLE INK.

Take the solution of saccharum saturni, or sugar of lead, and write with a clean pen ; then dry

dry your paper, nothing will appear; let the person to whom your letter is directed, have an infusion of quick-lime and yellow orpiment in water ready, and sprinkle the letter therewith, and all the words will appear black and legible. Or,

After you have wrote your mind with the solution of the saccharum saturni, and dried it, you may write any thing you please over all the paper with common ink, in order to cover your design the better; when your correspondent gets your letter, let him take a bit of clean sponge dipt in the infusion of lime and orpiment, and rub the paper gently with it, all the ink will immediately vanish, and that wrote with the invisible ink will appear black and legible.

R E D I N K.

Take the best fine Brasil chips; put them into a glazed pot; pour good wine-vinegar over it; let it stand three or four hours to finoak; then take beer that is clear and bright; mix it with pure pump-water, more than an inch above the chips; set it on a gentle fire; let it boil, but take care it do not boil over; after it has boiled some time, add powdered allum the quantity of a walnut to it, and as much gum-arabic; set it again upon the fire and let it boil; after it has boiled a little, take it off and strain the liquor from the chips;

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put it into a glass, close it up, and you will have a fine red ink.

TO MAKE INDIAN INK.

Put six lighted wicks into a dish of oil; hang an iron or tin concave cover over it, at a convenient distance, so as to receive all the smoak; when there is a sufficient quantity of soot settled to the cover, then take it off gently with a feather upon a sheet of paper, and mix it up with gum-tragacanth to a proper consistence

N. B. The clearest oil makes the finest soot, consequently the best ink.

CHINA INK.

Take dried black horse-beans; burn them to a powder; mix them up with gum-arabic water, and bring them to a mass; press it well and let it dry.

TO MAKE FLOWERS OF ISINGLASS IN
IMITATION OF ENAMEL.

Take half an ounce of the clearest and best isinglass; dissolve it over the fire in half a pint of water; then strain it through a cloth; let it stand till it is cold, and you see it is a strong jelly; then take an ounce of flake-white ground very fine; dissolve as much of your isinglass as will make it pretty thick; take fine silvered wire, and twist it double on a wheel like thread, and make it up in flowers, the form of
violets

violets, auriculas, polianthos, primroses, jonquils, &c. according to your fancy; keep your enamel warm, and dip in your flowers, and they will all fill up and look like enamelled work: paint them to resemble nature as much as possible; set them to dry; beat the white of an egg to a froth, and let it stand; take the clear and mix it with a syrup of white sugar-candy, and varnish them over with it, and they will be extremely pretty.

HOW TO SILVER GLASS GLOBES.

Take two ounces of quicksilver, one ounce of bismuth, of tin and lead half an ounce each: first put the tin and lead in fusion; then put in the bismuth; and when you perceive all in fusion, let it stand till almost cold, and pour in the quicksilver.

After this take the glass globe, which must be very clean, and the inside free from dust; make a paper funnel, which put in the hole of the globe, as near the glass as you can, so that the amalgama, when you pour it in, may not splash and spot the glass; pour it in softly, and move it about, that the amalgama may touch every where; if you find it begin to curdle, hold it over a gentle heat, and it will flow again: the cleaner and finer the globe is, your looking-glass will be the better.

COLOURS

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COLOURS TO BE USED IN PAINTING UPON GLASS.

The following colours must be all finely ground in oil.

Flake-white must be ground with nut-oil, else it turns yellow. Ivory-black, Spanish brown, umber, rose-pink, vermilion, red-lead, Indian ink, lake, English pink, oker, Prussian blue, verdigrise and verditer. When they are ground, the best way is to put them up in bits of bladders close tied, and when you use them, prick the bladder with a pin, and you can easily squeeze out the paint; or you may put your colours in shells or cups, and cover them with cold water after you use them, which will preserve them from drying up, or cracking.

Ultramarine and carmine being in powders, it is best to mix up a little, according as you want it, with a drop or two of nut-oil on your pallet.

When your colours are prepared, and good pencils at hand, lay a sheet of white paper on your table; take the plate in your left hand, the turpentine side next you sloping, and all the impression and tints will appear; then lay on the lighter colours first on the light parts of your print, and the dark colours over the shaded: patterns will be needful for young beginners: one colour will hide another as you lay them on.

For

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For Red, lay on red-lead, and shade with carmine.

Yellow, first light, then darker.

Ultramarine and Blues may be shaded with indigo.

Green done with verdigrise, and Dutch pink.

You can lighten any of the colours by a mixture of white; and darken them as you think proper with deeper shades. You can thin the colours as you please with a little oil of turpentine.

Have a pencil for each colour, and wash them in turpentine; your glass must stand four or five days to dry, free from dust, after it is painted, before it be framed.

N. B. You may paint on glass with the above colours, any birds, flowers, landscapes, &c. as your fancy leads you; only great care must be taken not to blend the different colours: when judiciously done, they look very pretty.

INSTRUCTIONS FOR PAINTING ON PAPER AND SILK, AND COLOURING PRINTS, DRAWINGS, &c.

It is impossible to give directions here for drawing; that must be left to the taste and genius of the performer; only nature cannot be too closely adhered to: the light should always come in from the left hand, and consequently the shades will appear on the right side. The principal colours used in flower-painting

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painting are, flake-white, carmine, lake, vermilion, liquid blue, sap-green, gamboge, China ink, umber burnt and unburnt, distilled verdigrise.

Flake-white, umber, lake and vermilion, ought all to be ground with a mallet on a marble with thin gum-water; carmine mixed up with a gum-water; sap-green dissolved in water and gum; gamboge the same; the burnt umber for dark colours, and the unburnt for lighter: they keep best in phial glasses, and no more taken out than what is immediately used, as it will otherwise crack and scale off, and so be lost unless it be ground over again. All these colours you can temper as the work requires: If you are to paint on paper, let the same lay flat on a table, and put something heavy on the corners to keep it from shifting: If you paint on white satin, or any other silk, it must be stitched upon a cloth stretched in a frame or tent: take care to have always at hand a phial with water, in which a good deal of allum has been dissolved, and, with a clean pencil, cover all the draughts with this liquid, to keep the colours from running: observe, you cannot paint on silk properly, without first laying on this size, which must be dry before you begin to paint.

Have water in which pure gum-arabic and white sugar-candy have been dissolved, also at hand; it prevents the colours from flying off.

Have

Have a little phial with spirits of hart's-horn, a little drop of which mixt among the carmine adds greatly to its beauty.

You must have hair-pencils of several sizes; the best are these that keep close when wet.

Roses are laid on with pale carmine and white, which may be softened with a faint wash of pale blue; then shaded with carmine and less white, and the deepest with carmine by itself; make the heart always darker than the rest; the stalks are brownish, done with sap-green and a little carmine; make some of the leaves a yellowish brown as if withered; this has a very natural look.

Tulips are so various, that no certain directions for colouring them can be given; some are done with lake and carmine mixed, or on white; others are purple laid on with blue, carmine and lake; these colours must be streaked according to nature.

The Crocus are of two sorts, yellow and purple; the yellow must be done with paler and darker gamboge; the purple done with that colour, and stript with a deeper tint; the seed of both is yellow.

Anemonies are of several sorts, as purple, scarlet, and straw colour; some are done with vermilion, and shaded with the same colour, carmine and lake; variegated ones are first laid on with pale gamboge, and shaded according to nature.

The

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The blue Hyacinth is laid on with blue and white, and shaded with less white : for the red, a faint tinge of carmine must be gently washed over, and finished with a little blue and white.

Crown Imperial is first begun with a lay of gamboge, then one of red, and shaded with carmine.

Auricula : The various beauties of this flower have exercised the pencils of the curious to diversify them according to the different productions of nature ; and to that we must refer, a blossom from the garden being the only pattern.

Jonquil is done with a lay of gamboge, and shaded with carmine.

Ranunculas are various ; some white and clouded with crimson, some yellow or straw, and stript red, done with carmine ; make some of the leaves a yellowish brown, as directed for the rose leaves.

Iris : The blue one is commonly chosen in painting, and the only proper way is from a natural flower, or a coloured pattern to paint it.

Piony is a deep crimson, laid on with carmine, and proceeding with a darker for shading.

Carnations, martagons and sun-flowers, honey suckle, French and African marigolds, asters, polianthos, wall flowers and pinks, must all be coloured from natural or artificial patterns.

TO EXTRACT ESSENCES AND ESSENTIAL OILS,
FROM WOODS, BARKS, ROOTS, HERBS, BER-
RIES, SEEDS, &c. WITHOUT THE HELP OF
FIRE OR DISTILLATION.

Take mint, sage, orange-peel, cinnamon,
cloves, mace, or any thing you please; pour
upon them a spoonful or two of æther, and
after it has stood an hour in a cold place, fill
up the bottle with cold water, and you will
see the essential oil swimming upon the surface,
and easily separable by a funnel: Of this
essential oil, one drop only, upon a lump of
sugar, manifests to the taste and smell the
medicinal virtues of the plant, &c. exquisitely
drawn and comprehended in this essence.

O F D Y E I N G.

The dyeing materials are generally applied
in decoctions of water, more or less strong,
according to the occasion; sometimes by only
dipping the stuff in a dye-vat, sometimes by
boiling it therein, and sometimes by leaving
it, a day or more, to steep. For black in
cloaths and stuffs of value, it is begun with a
strong decoction of woad and indigo, which
gives a deep blue; after which the stuffs be-
ing boiled with allum and tartar, or pot-ashes,
are to be maddered with common madder;
then dyed black with galls, copperas and shu-
mach, and finished by bouk boiling in weld.

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Scarlet

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Scarlet is dyed with kermus and cochineal, with which also may be used agarick and arsenick.

Crimson scarlet is given with mastick, cochineal, aquafortis, sal-ammoniac sublimate, and spirits of wine.

Violet, scarlet, purple, amaranth and pansy scarlets, are given with woad, cochineal, indigo, Brasil, Brasiletto and orchal.

For common reds, pure madder is used, without any other ingredients.

Crimson reds, carnation, flame and peach colours, are dyed according to their several hues, with mastick, cochineal, madder, or the like.

Crimson red is prepared with Roman allum, and finished with cochineal.

Pearl colour must be bouked a little, with galls and copperas, or the like.

Orange aurora, or golden yellow, brick colour and onion-peel colour, are given with woad and madder, tempered according to their respective shades.

For blues, the dark are given with a strong tincture of woad; the brighter with the same liquor, as it weakens in working.

Dark browns, minims, and tan-colours, are given with woad, weaker in decoction than for black, with allum and pot-ashes; after which, they are maddered higher than black: for tan-colours, a little cochineal is added.

Pearl

Pearl colours are given with galls and copperas: some are begun with walnut-tree roots, and finished with the former; though, to make them more serviceable, they usually dip them in a weak tincture of cochineal.

Greens are begun with woad and finished with weld; pale yellows, and lemon colours, and sulphur colours, are given with weld only.

Olive colours of all degrees, are first put in green, and taken down again with foot, more or less, according to the shade required.

Hair colours, musk and cinnamons, are given with weld and madder.

Bright orange red, is given with weld and goat's hair. boiled with pot ashes.

N. B. All stuffs are washed after dyeing.

DYEING OF SILKS.

Dyeing of silks is begun by boiling them with soap, &c. and the scouring and washing them in the river, and steeping them in allum-water cold. For crimson, they scour them a second time, before putting them in the cochineal vat.

Red crimson is dyed with pure cochineal, mastick, adding galls, turmeric, arsenick and tartar, all put together in a copper of fair water almost boiling; with these the silk is to be boiled an hour and a half, after which it is suffered to stand in the liquor till next day.

Violet crimson is also given with pure cochineal, arsenick, tartar and galls; put the galls

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in less proportion than the former: when taken out, it is to be well washed and put in a vat of indigo.

Cinnamon crimson is begun like the violet, but finished by bouk boiling; if too bright, with copperas, if dark, with a dip in indigo.

Light blues are given in a bouk of indigo.

Sky blues are begun with orchal, and finished with indigo.

For citron colours, the silk is first allumed, then welded with a little indigo.

Pale yellows, after alluming are dyed in weld alone.

Pale and brown auroras, after alluming, are welded strongly; then taken down with rocour, dissolved with pot-ashes.

Flame colour is begun with rocour; then allumed and dipped in a vat or two of Brasil.

Carnation and rose colours, are first allumed, then dipped in Brasil.

Cinnamon colour, after alluming, is dipped in Brasil and Brasiletto.

Lead colour is given with fustick, or with weld, Brasiletto, galls and copperas; but the galls, on these and other occasions, are not to be purchased.

Black silks of the coarser sort, are begun by scouring them with soap, as for other colours; which done, they are washed out, wrung and boiled an hour in old galls, where they are left to stand a day or two; after which they are washed again in fair water, wrung and
put

put in another vat of new and fine galls; then washed and wrung again, and finished in a vat of black.

Fine black silks are only put once into galls, viz. the new and fine sort, which has only boiled an hour; then they are washed and wrung out, and dipped thrice in black, to be afterwards brought down by back boiling with soap.

DYEING OF THREAD.

Dyeing of thread is begun with scouring it in a lye of good ashes; after which it is wrung, rinsed out in river-water, and wrung again.

For a bright Blue, it is given with Brasiletto and indigo.

Bright Green is first dyed blue, then back boiled with Brasiletto and verditer, and lastly woaded.

For a dark Green, it is given like the former, only darkening more before woading.

Lemon or pale Yellow is given with weld mixt with rocou.

Orange and Isabella, with fustick, weld and rocou.

Red, both bright and dark, with flame-colour, &c. are given with Brasil, either alone, or with a mixture of rocou.

Violet, dry rose and amaranth, are given with Brasil, taken down with indigo.

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Feulmort and olive colour, are given with galls and copperas, taken down with weld, rocou or fustick.

Black is given with galls and copperas, taken down and finished with Brasiletto wood.

TO BLEACH BEES-WAX.

Melt your wax, and, while hot, throw it into cold water to reduce it to little bits, or spread it out into very thin leaves, and lay it out to the air night and day, on linen cloths; then melt it over again and expose it as before; repeat this till the sun and dew have perfectly bleached it; then, for the last time, melt it in a kettle, and cast it with a ladle on a table covered over with little round hollows, in the form of the cakes sold by the apothecaries; but first wet your moulds with cold water, that the wax may be the easier got out; lastly, lay them out in the air for two days and two nights, to make it more transparent and drier.

TO MAKE WAX-CANDLES.

Tie a dozen of wicks on an iron circle, at equal distances, over a large copper vessel, tinned and full of melted wax; pour a ladle-full of the wax on the tops of the wicks, one after another; what the wick does not take, will drop into the vessel, which must be kept warm by a pan of coals; so pour on till you have your candles as big as you chuse: If you want to have them of a pyramidal form, let
the

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the three first ladles be poured on at the top of the wick, the fourth at the height of $\frac{3}{4}$, the fifth at $\frac{1}{2}$, and the sixth at $\frac{1}{4}$; then take them down hot, and lay them aside of each other in a feather-bed folded in two, to preserve their warmth and keep the wax soft; then take them down, and roll them one by one on a smooth table, and cut off the thick end as you please.

COSMETICKS, &c.

HOW TO BEAUTIFY THE SKIN.

To such as may have a disagreeable colour, take two quarts of vinegar, two ounces of mouth glew, two ounces of nutmeg, and six ounces of honey; distill it with a slow fire; put in a small quantity of red saunders after it is distilled, before using it; wash the face and neck with soap and water; then wash with the distilled liquor: it will give a fresh healthy complexion. Or;

Take rye-bran, and sift it clear from all the flour; soak it three hours in white-wine vinegar, and stir it in some yolks of eggs; distill it in *balneo mariæ*; the water thus drawn off will very much beautify the skin.

A N O T H E R.

Take parsley, nettle-seed and peach kernels, of each the same quantity; boil them in clear water and wash with it. Or;

Take

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Take lemons and hard boiled eggs; cut them in slices, and lay them one over the other in a still, the bottom being covered with well washed turpentine; use the water when distilled. Or;

Boil the blossoms of rosemary, allum and tartar, in wine; and wash with it. Or;

Take slices of lemon and dried beans; let them soak in wine; add to it honey, eggs, and goat milk, so distill it. Or;

Boil two calves feet in nine pints of water, to half the quantity; then put in two pounds of rice, and crumbs of fine bread steeped in milk, the white of ten new laid eggs; mix all, and distill it; mix in the distilled water a little camphire and allum. It is a very beautifying wash.

VIRGIN MILK VERY EASILY MADE.

Take a quantity of house-leek, beat it in a marble mortar, and press out the juice and clarify it; when you want to use it, put a little of it in a glass, and pour in some drops of spirits of wine, which will curdle it: it is very proper to make the skin smooth, and take away reddish spots.

A WATER TO TAKE AWAY PIMPLES.

Take an equal quantity of house-leek and celandine, distill them in a sand-heat and wash with it.

POWDER

POWDER FOR TAKING OFF FRECKLES.

Calcine sheep-shanks and reduce them to powder; infuse the powder four and twenty hours in white-wine; and rub the face with this infusion.

PASTE FOR THE HANDS.

Blanch and beat a pound of bitter almonds, with two handfals of stoned raisins, till they are very fine; then take three spoonfuls of white-wine or brandy, and as much ox-gall; three spoonfuls of brown sugar, the yolks of three eggs; beat it well together, set it over the fire, and give it two or three boils; when almost cold, mix it with the almonds; keep it cool, it will be good six months.

TO TAKE OFF WARTS.

The leaves of marigolds, the juice of fig-wort and favine, the juice of green figs, salt beat in the juice of horse-raddish, common salt dissolved in vinegar and snails, are all efficacious remedies for warts; so is agrimony infused in vinegar.

TO MAKE THE TEETH WHITE

Mix three spoonfuls of celandine, nine spoonfuls of honey; and half a spoonful of burnt allum all together, and rub your teeth with it.

A POWDER

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A POWDER FOR THE TEETH.

Take half an ounce of cream of tartar, and a quarter of an ounce of powder of myrrh; rub your teeth with it thrice a-week.

TO MAKE SOFT POMATUM.

Take what quantity of hog's lard you chuse to make; cut it down in small pieces, and cover it with fair water; change it every twenty-four hours for eight days; when it is quite white, put it into a small pan, and melt it over a clear fire; when it is all melted, strain it, and put to it some essence of lemon to perfume it; so keep it for use.

HARD POMATUM.

For hard pomatum, blanch the hog's lard in the same manner; and blanch also some sheeps suet, and boil together with a little white wax; scent it with essence of lemon or lavender; then make round paper cases, and, when cold, turn down the other end, and keep it for use.

RED POMATUM FOR THE LIPS.

Take an ounce of white-wax and ox-marrow, three ounces of white pomatum, and melt all in a bath-heat; add a drachm of alkanet, and stir it till it acquire a reddish colour.

TO

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TO WASH GAUZES.

Wash them in water as hot as you can hold your hands in it; after they are thoroughly washed, rinse them in hot water; don't let them touch cold water, as it yellows them; then hang them up to dry; make your starch, and dissolve a bit of the clearest gum arabic in it; mix up some raw starch and add to it, and with this starch your gauzes; give them a clap or two, then pull them even; so dry them, fit for smoothing.

LAWNS AND MUSLINS.

When you have clear-starched them after they are blued, dry them; then dip them in thick starch; keep clapping them till they are dry enough for the irons.

TO WASH LACES, NET OR CAT-GUT

If your lace or net be very dirty, steep them over night in sweet oil, or take some soft pomatum and rub them over with it; roll them up, especially your blond lace: Have a kettle boiling with soap and water; put your laces into it; when you see the water dirty, press your laces or net with a wooden-ladle or spoon: have another kettle ready boiling with fair water, which always supply your laces with, from one water to another, adding soap to it, till the last lather be as clean as when it was put in.
Then

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Then take your thread laces and rinse them well in cold water; you may blue them or not to your own taste. Stiffen your blond laces with some dissolved white sugar candy without rinsing them; then pin them every half inch upon a clean sheet, the sheet being close stretched down to the table; so let them dry: they look much better done this way than when smoothed.

TO WASH PRINTED CALLICOS, COTTON AND LINEN.

Wash them in a weak lather of soap, a little more than milk warm; and, instead of bleaching them, put them into a tub of spring or pit-well-water, and change the water three or four times, till it be quite clear; and in the drying expose them as little to the sun as possible.

TO WASH WHITE SILK STOCKINGS, GLOVES OR MITTS.

Rub them with pomatum as above, and boil them in the same manner; then starch them; when half dry, calender them.

TO TAKE IRON-MOLDS OUT OF LINEN.

Bruise some sorrel well in a mortar; put boiling water in a bowl; lay a pewter plate over it; put your linen on the plate, and rub the mark with the sorrel till it comes out; then wash it.

TO TAKE MILDEW OUT OF LINEN.

Take soap and rub it very well ; then scrape some fine chalk, and rub that also in the linen ; lay it on the grass ; as it dries, wet it a little ; it will come out at twice doing.

A GOOD WAY OF WASHING TO SAVE SOAP.

Take a barrel, and bore holes in it half way ; put in some clean straw, and lay on that a peck of wood-ashes ; then fill it up with cold water, and set it into a tub to receive the water as it runs from the cask through the holes ; if it is too strong add more water, and wash your linen, slightly soaping the cloaths before you wash them : two pounds of soap will go as far as six pounds in the ordinary way, and make the linen much whiter.

TO MAKE ARTIFICIAL MILK.

Have a glass or phial of that medicine, known by the name of the Family Secret ; take what quantity of soft water you chuse and drop in the medicine ; then stir it about with a spoon, and it will immediately acquire the colour and consistence of milk, and may be very safely used.

HUNGARY-WATER.

Take a quantity of the flowers of rosemary ; put them into a glass retort ; and pour in as much spirits of wine as the flowers can
G imbibe ;

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imbibe ; dilute the retort well, and let the flowers macerate for six days ; then distill it in a sand-heat.

TO MAKE ROSE-WATER.

Gather your roses when just blown, after the sun has dried off the dew ; pick off the leaves, and spread them on a cloth till they are free from any moisture ; then put them in a pewter-still ; paste the top round ; place a clean dry bottle to the nose of the still, and tie a cloth round it to keep in the scent ; make a slow fire under your still ; you may increase it a little when it begins to drop, and draw out the fire when it begins to slack ; when it gives over dropping, turn the cake in the still, till it is quite dry.

TO MAKE COURT PLAISTER.

Take gum-benjamin and styrax, of each an ounce ; pour over them a pint of rectified spirits of wine ; and, after it has stood some time, strain off the liquor ; take two ounces of bruised isinglass, and boil it in half a pint of water till it is dissolved ; then strain it, and add half a pint of the tincture as above ; this quantity is sufficient for a yard of silk, which must be tacked tight in a frame, and the mixture spread hot upon it with a fine brush of camel's hair : when once laid over, dry it gently before a fire before it is spread again ; this must be repeated till the mixture is all laid on.

N. B. It

N. B. It must be spread before a fire at the distance of a yard, and the mixture must be kept hot.

TO SEPARATE GOLD AND SILVER FROM LACE, WITHOUT BURNING IT.

Cut the lace in pieces, and, having separated the thread from it by which it was sewed to the cloaths, tie it up in a linen cloth, and boil it in soap lye diluted with water, till you perceive it is diminished in bulk, which will take up but a little time, unless the quantity of lace be very considerable: then take out the cloth and wash it several times in cold water, squeezing it pretty hard with your foot, or beating it with a mallet, to clear it of the soap-lye; then untie the cloth, and you will have the metallic part of the lace pure and no where altered in colour, or diminished in weight.

N. B. If you cannot get a soap-lye, make what quantity will be sufficient with pearl-ashes and quick-lime.

TO MAKE WHIPT SYLLABUBS.

Take a quart or a pint of cream, according to the quantity you want to make; take half a pint of white-wine, the juice of two lemons or bitter oranges, half a pound of sugar finely grated; put it in a large china bowl, and whisk it well; put some claret or white wine in a bowl, and sweeten it to your taste; put in a little beat cinnamon, then fill your glasses

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as full as you please ; then take the froth of your cream and fill the glasses as high as it will lie on ; keep still whisking your cream till they are all full.

N. B. If you have a large chocolate-mill and a large deep bowl to mill it in, it is both quicker, and has a much stronger froth.

TO MAKE HARTS-HORN JELLY.

To half a pound of harts-horn take three quarts of water ; boil it over a slow fire till it jelly, which you may know by cooling a little in a spoon ; strain it into a well-tinned sauce-pan ; put to it a pint of white wine, sugar to your taste, and a stick of cinnamon ; whisk the whites of six eggs to a froth ; stir it well with the jelly ; let it boil three or four minutes ; then put in the juice of three lemons, and let it boil two minutes longer ; when it is well curdled, and quite clear, run it through your jelly-bag into a china basin ; you must return it into the bag till it be as fine as rock-water ; then fill your glasses : If you want it of an amber colour, lay some thin rind of lemon in the basin amongst the jelly.

TO MAKE CALVES-FOOT JELLY.

Take four of the largest calves feet you can get ; clean them well from the hair ; take out the large bones and split them ; put three quarts of soft water to them ; let them boil till the half is wasted ; then strain them and blow off any fat that may be on the top, and
when

when it has stood any time, not long, pour it into another bowl, clear from the grounds; put three gills of white wine, the juice of two oranges or lemons, sugar to your taste, the yellow rind of one of the lemons, and a piece of cinnamon; boil them for a little time; then take them off to cool a little; take the whites of six eggs and whisk them to a froth; stir them in your jelly; when it boils, and the eggs are like curd on the top, take it off and let it settle a little; then take the eggs and put them in your jelly-bag first, to help to thicken it.

N. B. I would prefer a clean napkin, sewed double in the form of a jelly-bag, to a flannel: Return your jelly into the bag till it be as clear as rock-water.

TO MAKE RIBBON-JELLY.

Take out the bones of four calves feet; put eight quarts of water to them, two ounces of isinglass, three ounces of harts-horn, a stick of cinnamon, a little mace, four lemons, and sugar to your taste; take six eggs and beat them to a froth, and mix with your jelly; boil it and run it through your bag; take as many little bowls as you want colours; tie up a little powdered turmerick in a rag, and steep it in your jelly for a yellow, or a little saffron; for red, cochineal; for green, the juice of spinage; blue, a little Prussian blue, or syrup of violets; run every colour about the thickness of your finger; one colour must be cold

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before you put another on, and that you run on must not be blood warm : the white is done with thick cream, and sometimes jelly alone.

N. B. This jelly will do for the different colours in your blamange.

TO MAKE RED CURRANT-JELLY.

As the common way of making currant-jelly is so generally known, I need say nothing of it, but I take the following method to be the best : When your currants are stript from the stalks, put them in a well-glazed jug, and cover it close ; set it in a pot of water, and let it boil near an hour, then strain the juice through a hair-search ; to every pint of juice, take a pound of sugar ; set it over a quick fire, in a small clean pot, and keep stirring it till the sugar is dissolved ; take off the scum as it rises ; you will know when it is enough by taking up a little in a spoon ; cover your glasses with paper cut to the size of your pots ; prick holes in them, and dip them in brandy ; keep them in a dry place.

TO MAKE WHITE CURRANT-JELLY.

Take the largest white currants, and strip and bruise them, and strain them through a clean cloth ; to every pint of juice take a pound of sugar ; set the juice on the fire in a small pan by itself, and let it boil ; it will throw up a very thick scum, and the juice will be quite clear ; beat your sugar ; let it be
single

single refined; put it in your pan, and put the juice to it: run it through a piece of muslin; set them to boil and skim them well; if done in this manner they will be quite fine: if you please, you may stone some white currants, and put them in and boil them till they are clear; but take care you do not boil them too high; paper them as you do other jellies.

N. B. If you boil them in a brass-pan they will turn reddish.

A GOOD JELLY OF PIPPINS.

After you have pared and cored your pippins, cut them in slices; have some water boiling in a tea-kettle; put your pippins in a pan, and as much water as will cover them; boil them to a mash; then put them in a strainer and let all the thin run from them; to every pint of liquor take a pound of sugar; wet your sugar and boil it till it comes to sugar again; keep it stirring all the time; pour in your liquor, and cut some pieces of candied orange-chips fine; let them all boil till they jelly, which will be quickly; you may perfume it if you please. You may preserve whole pippins in this jelly, only boil them first in a syrup by themselves. See preserved apples.

TO MAKE LEMON-JELLY.

Take six lemons, and grate off the yellow rinds into a pint and half of water; let it lye two hours; take near a pound of sugar and
the

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the juice of six lemons ; when the sugar is melted strain it through a searh ; then put to it the whites of five eggs well beaten ; take a little of the powder of turmerick tied up in a rag, and put it in a little water ; squeeze it a little in the jelly to make it a fine lemon-colour, but not too yellow ; skim it well when it boils ; when it jellies put it in jelly-glasses.

B L A M A N G E.

Make your stock in the same way as for the ribbon-jelly : if you want your blamange white, take half a pound of sweet almonds, blanch and beat them ; take half a pint of thick cream and add in the beating ; press them through a coarse hair-sieve, and return them till you get as much of the almonds as possible ; mix this well with your jelly after it runs, and then mix it well together and it will be a fine white. If you want one yellow, do it with the yolks of raw eggs ; put it in your blamange frame till it be quite cold ; as the frames have often many divisions, and made so very high that the blamange is apt to break in the coming out, dip your frame in boiling water, and it will come easy out : take care no water go in the frame.

TO PRESERVE DAMSONS WHOLE.

Take what quantity of damsons you please ; bruise them in pieces ; put them in a pan over the fire, with as much water as will cover them,

them, when they are boiled, and the liquor pretty strong, strain it ; then take what quantity you chuse to keep whole : to each pound of whole damsons take a pound of lump-sugar ; put the third part of your sugar into the damson-juice ; set it over the fire, and, when it is warm, put in the damsons ; let it have a boil ; take them off for three quarters of an hour ; be sure they be covered with a stew-pan lid ; set them on again ; let them simmer over the fire for half an hour more ; then take them out and put them in your pots ; throw the remainder of the sugar on them, and pour your liquor over them hot through a searck ; let them stand till next day, then boil them up again till they are enough ; take them carefully up with a spoon, and place them in your pots ; boil your liquor till it jellies ; let it stand a while, and then pour it over them ; so paper them up.

TO PRESERVE PIPPINS.

Pare and core them with a coring-iron run through the middle of them ; put them in cold water, as much as will cover them, to keep them from colouring ; to eighteen pippins take three quarters of a pound of loaf-sugar, some cinnamon, and lemon-rind cut like threads ; boil your syrup and skim it ; about a pint of water will do ; put in your rinds, let them have a boil ; then put in the pippins and cover them down with a sheet of writing paper, and set them

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them on a slow fire ; let them stew till they are very tender and look clear ; take them out and place them handsomely on your dish ; lay the pieces of lemon-rind upon them : run your syrup through a searh ; you may, if you chuse, throw a few nonpareils coloured round the edge of the dish.

GOOSEBERRY JAM.

Take your best walnut or red goodseberies ; clip off the tops and ends with a pair of scissars ; to two quarts of berries take a pound of sugar ; make it into a syrup with half a pint of water to the pound ; take two or three teaspoonfuls of Florence oil ; put it into a dish ; pour your gooseberries on the dish, and turn them backwards and forwards a little time ; this prevents their breaking, and is the way, I am told, they preserve them in Italy. Then put them into the syrup ; let them boil softly till they are quite clear ; take them carefully up without breaking ; put them in your pots ; when cold tie them up with leather.

TO MAKE CROCAN T.

A crocant-frame is made of copper, in the form of an egg cut through the middle, and about the size of two quarts ; take about half a pound of flour and an ounce of fine grated sugar, which make up in a paste with the yolk of an egg or two, and a little water ; roll it out very thin and even ; butter the out-side of
your

your crocant, and lay the paste over it quite smooth, and, with a sharp pointed pen-knife, cut it in what figure you please ; but it is only those who understand drawing can do it to perfection, as it ought to be done, in coats of arms, flowers, foliage, &c. When done set it in the oven to harden, and make it a cover for preserved fruits of any kind. You may boil sugar till it be quite tough and ropy, and butter your frame, and with a small twig lay it on the frame, in what figure you please ; take it off when quite hard, and use it as the other.

CONSERVE OF HIPPS.

Pull your hipps when they are ripe, but before they turn too soft ; cut them through the middle, take out all the seeds and white ; then put them in an earthen bowl, and stir them every day, else they will grow mouldy ; let them stand till they are soft enough to rub through a coarse searh or fine cullender : it requires pains to rub them through, as they are a dry berry ; grate their weight in sugar, mix them well together ; they require no boiling ; keep them in jelly pots for use.

TO MAKE ORANGE MARMALADE.

To the largest best Seville oranges take the same weight of single refined sugar ; grate your oranges ; then cut them in two, and squeeze out the juice ; throw away the pulp ;

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pulp; cut down the skins as thin as possible, about half an inch long; put a pint of water to a pound of sugar; make it into a syrup; beat the whites of three or four eggs, and clarify it; put in your rinds and gratings, and boil it till quite clear and tender; then put in your juice, and boil it till it is of a proper thickness; when it is cold put it in your pots, and paper it up; this is by much the easiest and best way of making marmalade.

TO PRESERVE ORANGES WHOLE.

Take the best Seville oranges; grate off the outer rind; rub them with salt and throw them into fresh water twenty-four hours; then take them up and dry them well; with a scooping iron run them through; take out all the seeds; take their weight and the half of that of sugar, and make a syrup; to every pound of sugar put a pint of water; make it in a syrup; when it is clarified put in your oranges, and let them simmer over a slow fire, till they be quite clear: if your syrup is not enough, take them out, and boil it till thick; so return the oranges into it, and boil it a while.

N. B. They will keep good a twelve-month or more.

TO PRESERVE GREEN GOOSE-

BERRIES.

Be sure the berries be dry when you pull them; clip off the tops and ends with a pair of scissars; put them in quart bottles, and cork them; have ready a pot of water; put the bottles in up to the neck; let the water boil slowly till the berries coddle; so do all the bottles, and dip the necks in rosin, which will keep out the air; put them in a dry place: you may do them without scalding; but then the skins are always tough.

TO KEEP ARTICHOKEs ALL THE YEAR.

Boil up a pickle of salt and water; skim it well; let it stand till the foulness of the salt fall to the bottom; then pour it off into the vessel in which you design to keep your artichokes; blanch them in boiling water, only so long that you may take out the chokes; wash them in several waters, till quite clean; put them in the pickle; to which you may add a little vinegar, if you choose, and pour on the top some butter melted, that no air may enter; cover the vessel carefully with a piece of linen cloth, and lay a board or lid over it to keep it quite free of air: when you want to use them, steep them in fresh water to take off the salt: you can keep them this way more than twelve months.

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TO KEEP ARTICHOKE DRY ALL THE YEAR.

When you have blanched them, and taken out the chokes as above directed, lay them on clean sieves, or any thing proper for draining them; then put them in an oven moderately hot, till they be as dry as wood; steep them two days in lukewarm water before you use them; which will make them quite fresh.

ANOTHER WAY OF KEEPING THEM.

Cut off the leaves and chokes with a sharp knife, and throw each bottom directly into fair water, otherwise they will turn black; when you take them out cover them all over with flour; dry them in an oven as above; when you want to use them, let them soak twenty-four hours, and boil them as you do other artichokes.

RATAFIA OF CHERRIES.

Bruise your cherries and put them into a brandy cask; then put in the kernels of cherries, strawberries, and sugar, cinnamon, white pepper, nutmegs and cloves; and to twenty pounds of cherries pour on five pints of brandy; leave the cask open ten days; then bung it up, and in two months draw it off.

T O I C E T A R T S.

Take the yolk of an egg or two, and a little melted butter; beat them very well together; wash

wash over the tops of your tarts with a feather; sift sugar on them just as you put them in the oven.

TO MAKE RATAFIA-CREAM.

Take eight laurel leaves; boil them in a quart of cream; take out the leaves; then beat the yolks of six eggs, with a little cream and sugar to your taste; then thicken the cream with your eggs; set it over the fire, but do not let it boil; stir it all the while one way; then put it in china dishes or plates: when cold it is fit for use.

CHOCOLATE-CREAM.

Take a quart of milk, a quarter of a pound of sugar; boil them for a quarter of an hour; beat up the yolks of two eggs; put it in the milk, and give it a boil; take it off the fire, and put chocolate to it till the cream has taken the colour of it; then boil it again a minute; strain it through a sieve, and put it in china dishes.

N. B. You may make Cinnamon-cream the same way.

TO MAKE A HASTY CREAM.

Get three quarts of milk, warm from the cow; set it on the fire; when it begins to rise take it off, and let it stand a little; take the brat or cream off the top of it, and lay it on a plate; set your pan on the fire again, and con-

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tinue to do so till your plate is full of brat or cream: throw grated sugar over it, and a little orange-flower and rose-water.

TO MAKE LEMON-CREAM.

Take a pint of cream, and boil it with the rinds of a lemon cut very thin; when almost cold, take out the rinds; beat the yolks of three eggs with a quarter of a pound of sugar, and stir it in your cream; put in the juice of a lemon by degrees, else it will break; keep stirring till it is quite cold.

A L M O N D - C R E A M.

Take a quart of good cream, boil it with a bit of lemon-peel, two blades of mace; sweeten it to your taste; take four ounces of almonds and blanch them, and beat them in a marble mortar, with two spoonfuls of rose-water; take the whites of ten eggs, strain them to your almonds; beat them together, and rub them through a cullender; mix all together with your cream, and set it on the fire, and stir it with a whisk all the time it boils; pour it in a china dish: serve it up cold.

TO MAKE A GOOD CREAM.

Take a pint of cream, and sweeten it to your taste; put in a little grated nutmeg, two spoonfuls of rose-water, two spoonfuls of sweet mountain; beat up four eggs well and put it to your cream; set it over the fire, and stir

stir it with a whisk one way till it turn thick: pour it into china cups, so serve it.

TO MAKE WHIPT CREAM.

Take a quart of thick cream, and beat the whites of eight eggs well with half a pint of sweet mountain; mix it well together, and sweeten it to your taste with fine grated sugar; tie a little musk in a rag; steep it in a little cream; whip it up with a whisk; take the froth with a spoon, and lay it on your glasses.

S N O W - C R E A M.

Take half a pint of thick cream, sweeten it to your taste; put in some pieces of lemon-peel; beat the whites of four eggs, and mix with your cream; set it on the fire, and keep it stirring one way till it be thick; run it through a searce into your dish; let it stand till it be cold: take the whites of eight eggs, and beat them with a snow stick till they become entirely as snow: put in a little fine grated sugar; cover your cream with the snow; if the snow is good you may make it near as high as a sugar-loaf; take nonpareils of different colours, and sprinkle them on in what figure you please: for variety, you may brown one with a hot salamander.

FOR CLOUTED CREAM.

Let your milk be milked at night, and strain it in an earthen vessel that can bear the fire;

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let the quantity be six quarts; set it on a charcoal fire in the pan; disturb it as little as possible; let it stand till it just pimple up; don't let it boil; take it off, and set it in a cool place, and let it stand till next morning; take off the cream with a slice, and lay it on a china dish; it eats well with strawberries.

TO MAKE A CHEESE-CAKE.

Take four quarts of milk; earn it as for cheese; put it into a searce; let the whey drain from it; break the curd well with your hands; then rub it through a cullender; then take half a pound of butter; beat five eggs, grate in a nutmeg, put in a little rose-water and a little cream if it is too thick; sweeten it to your taste; beat it with your hand to make it light; you may add a little butter, and half a pound of currants well cleaned; sheet your pans with puff paste, and fill them; put a few more currants on the top and bake them.

TO MAKE A CHEESE-CAKE WITHOUT EARNING.

Take a quart of thick cream, and set it over the fire; beat up twelve eggs very well; boil a little mace in your cream; just as your cream boils, put in your eggs, with a quarter of a pound of butter; stir it a little on the fire, till it begins to curdle; take it off, and throw it in a hair searce, so that the whey may run from it; gather the curd as for cheese; put it into a stone-mortar, with half a pound of butter,

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a pint of cream, a glass of wine, two spoonfuls of rose-water, half a pound of grated sugar; then beat and grind these all well together, till they are very fine; then pass them through a cullender; fill your petty-pans but half full: you may put currants in them, if you please; so bake them.

A LEMON OR ORANGE CHEESE-CAKE.

Take the yellow rind of three lemons; boil them very tender, and beat them, with a quarter of a pound of sugar, very well in a marble mortar; take the yolks of six eggs and eight ounces of butter; beat your eggs well, and mix all thoroughly together; lay puff-paste in your petty-pans: The orange is done the same way, only requires more sugar; fill your petty-pans half full, and bake them.

TO MAKE A PLUM-CAKE.

Take four pounds of currants, and wash them well the night before you use them; spread them, and let them be dry; take two pounds of raisins; pick and chop them small; take six pounds of flour, an ounce of cloves and mace, half an ounce of cinnamon and nutmeg, a pound of almonds blanched and cut in slices, a pound of sugar, three-quarters of a pound of citron and orange peel, a pound of butter, a quart of barm or yeast, a quart of warm milk or cream; mix all these well together, and let it lay to rise; then work it well together, and
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let it lay before the fire that it may rise properly; paper your hoop and butter it; put in your cake, and smooth it on the top; run a fork down it several times to keep it from blistering; it will take betwixt three and four hours to bake in a quick oven.

TO MAKE A SEED-CAKE.

Take six pounds of fine flour well dried, six pounds of loaf-sugar beaten and searced, four dozen of eggs; beat them well with a whisk; take two or three pounds of butter, as you choose to have it of richness; work it with your hand to a cream; then put in a little of your flour, then a little of your sugar, then a little of your eggs, and so keep doing till all is in; beat it well with your hand all the time: you may put in what quantity you think proper of almonds, citron, orange peel, cinnamon and nutmeg, with caraway-seed, as you would have it of richness: paper your hoop and butter it; so put in your cake; bake it for three hours in a quick oven, then draw it.

N. B. You may make your cake as small as you please, by proportioning the ingredients.

TO ICE THE CAKES.

Take the whites of six eggs, and beat them to a froth, so that none of the egg remains; take two pounds of double refined sugar; grate and searce it through a lawn sieve, and mix it with your eggs; when you take your cake out
of

of the hoop, scrape off the outside; take a brush and brush it all over; lay on your icing with a knife as even as possible; the heat of the cake will harden it.

N. B. This is for the two large-sized cakes.

TO PARCH ALMONDS.

Take a pound of Jordau almonds; blanch them and dry them; take a pound and a half of loaf-sugar grated and sifted; take half a pint of water and a little rose-water; put it into your preserving pan; and boil it candy high; then put your almonds into the syrup, and keep them stirring over the fire till they are dry and crisp; put them in paper, and keep them dry.

TO MAKE WAFER PAPER FOR DROPPING ALMOND BISCUIT ON.

Take half an ounce of isinglass; boil it till it be quite dissolved; strain it, and beat the whites of six eggs well; take a little barm, and mix them well together; make them thick with fine flour; then thin it with gum-water; take a japaning brush, and lay the batter over tin plates; so dry them in a slow oven.

TO MAKE FINE BISCUIT.

Take a pound of fine flour, and dry it well before a fire; grate a pound of double-refined sugar; take the whites of twelve eggs, and yolks

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yolks of eight ; beat them till like cream ; take caraway-seed and bruise it, and put it to your pound of flour and sugar ; strain in the eggs, and beat it for a long time together ; for the longer it is beat it will be the lighter ; drop them on wafer-paper, and dredge them over with fine sugar ; bake them in a moderate oven ; then cut the paper round the biscuit, so keep them dry.

TO CANDY ANGELICA.

Take Angelica in the month of April ; boil it till it be tender ; then take it up, and scrape the outside off, and lay it on a sieve to dry ; take double its weight of sugar, and make it in a strong syrup ; cover it close, and warm it often, but never to boil ; lay it on tins to dry, and keep it near the fire.

TO MAKE ELDERBERRY-ROB.

Gather your Elderberries when they are quite ripe ; bruise them, and strain them, and to every pint of juice take a pound of loaf-sugar ; put it on the fire and let it boil twenty minutes ; it will not jelly, but be a very thick syrup : when it is cold put a wet bladder over your pots, and leather above ; so keep it for use.

TO MAKE VINEGAR.

To every quart of water take half a pound of coarse sugar ; let it boil some time ; skim it, then

then put it in a clean tub, and let it stand till it be near cold; then toast a piece of bread and spread it over with barm; let it work four and twenty hours; then put it in a cask; set it as near the fire as you can; it will be fit for using in three months: this vinegar is too strong for most pickles.

TO PICKLE WALNUTS TO KEEP GREEN.

Take what number of walnuts you please; put them in a well-glazed jar, and pour boiling vinegar and salt over them; let them stand a month, and the vinegar will turn black; take out the nuts, and wipe them well; clean your pot, lay in your nuts in rows: to one hundred of walnuts, take half a pint of white mustard, some sliced horse-radish, a few cloves and blades of mace, an ounce of ginger, and one of black and Jamaica pepper, three or four bay leaves, if you have them; strew on your spices betwixt each row of your nuts; then boil as much vinegar as will fill your pots; pour it boiling hot and cover them.

TO MANGO E CUCUMBERS.

Cut a little slip out of the side of your cucumbers; take out the seeds, as little of the meat as you can; put in the inside bruised mustard-seed, a clove of garlick, some ginger sliced, and a little horse radish; tie the piece in again; make a pickle of vinegar, salt, pepper, and cloves; boil it and pour it on the mangoes;

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mangoes; and so for nine or ten days together; when cold, cover them close up with leather.

TO PICKLE CUCUMBERS.

To an hundred of small cucumbers, take a quart of vinegar, and some dill-seed; set it over the fire in a copper-pan and let it boil; then put in your cucumbers; take it off a little, then put it on; don't let it boil; let your cucumbers be warm through; when warm enough, pour them into an earthen jar, and cover it up close till next day; repeat the same next day; but the third day put in salt, some ginger slic'd, mace, nutmeg and pepper; set it over the fire again and let it boil a little; put in your cucumbers; when they are hot through, take them out till they cool; put them in a jar and strain your liquor over them, and cover them close up with leather.

TO PICKLE CURRANTS.

Take currants before they be ripe; give them a warm in white-wine vinegar, and sweeten it to your taste; keep them well covered in this liquor; send them to the table for variety.

TO PICKLE RED CABBAGE.

Take the highest coloured you can get; cut it in pieces the breadth of a straw, or smaller; put it in a jar; take cold vinegar, a handful of salt, half an ounce of black and half an ounce of

Jamaica

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Jamaica pepper, some ginger, and pour over your cabbage ; be sure they be all covered ; let them stand eight or ten days close covered, then use them.

N. B. It spoils red cabbage to pickle them with hot vinegar.

TO PICKLE BEETRAVE.

Take the largest red beet-root ; be careful none of the fibres be broke in digging it up, else it will bleed and be spoiled ; wash it very clean ; boil it till it be pretty tender ; scrape off all the rind or skin ; cut it in slices ; lay it in your jar ; take vinegar and salt, one ounce black pepper and one ounce Jamaica, mace and ginger, and fill your pot so that the pickle may cover the roots ; keep it for use.

N. B. Some chuse to mix the beet-root with the cabbage.

TO PICKLE WALNUTS.

Take walnuts, about the beginning of July, when a pin will pass through them ; lay them in salt and water ; let them lye four days ; make a fresh brine ; let them lye other four days ; take them out and wipe them well, and put them into your pickling pot : to one hundred walnuts take near half a pint of white mustard-seed, a head of garlick bruised, half an ounce of black pepper, half an ounce of Jamaica pepper, and a quarter of an ounce of mace, a large piece of horse-raddish
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cut in slices ; pour boiling vinegar over them till your pots are full ; cover them close ; when they are cold, tie them down with a wet bladder, and leather over it : you may keep walnuts in brine for a year ; the brine must be so strong as to bear an egg ; boil it and skim it ; and as you eat your pickled walnuts, you may replace them with walnuts taken out of the brine.

TO PICKLE KIDNEY-BEANS.

Gather your beans very young and tender ; you may top and tail them or not as you please ; make a brine of salt and water that will carry an egg ; put in your beans, and let them lie till they turn yellow ; strain them from the brine ; dry them well ; make a fresh brine in a copper-pan ; let it be as warm as you can hold your finger in it ; set them on a slow fire close covered with cabbage-leaves ; let them never be warmer for ten or twelve hours, and they will turn as green as a leek ; take them off from the brine, and dry them on a sieve ; wipe your beans, and put them in the pickling-pot ; take an ounce of Jamaica pepper, an ounce of black pepper, an ounce of ginger, and put it in among your vinegar, and fill up the pot. I have always found cold vinegar do better than when boiled.

N. B. You may do girkins, raddish-podds, potatoe apples, samphire, &c. the same way.

TO PICKLE MUSHROOMS.

Your mushrooms must be gathered early in the morning; one that is close and round is worth many that are open; put them into water; when they are all done, take them out and put them into a stew pan; add a good deal of salt, whole pepper, mace, nutmeg and cloves; let them boil in their own liquor sixteen minutes on a quick fire; take them off and throw them into a cullender, and let them stand till they are cold; then take all the spices you used in the boiling them; the one half white-wine vinegar, some salt, and a few bay-leaves, if you have them; give it a boil or two; there must be enough of liquor to cover them; put them in bottles, and keep them for use; pour in a little sweet-oil in the mouth of the bottle: observe the liquor must be changed often.

TO PICKLE PURSLAIN.

Take large green purslain; strip off all the leaves; lay the stalks in an earthen pot; take some whey, and put salt in it to make it like brine; boil it, and skim it well from the curd; put in some Jamaica pepper; let it stand till it be cold; then pour off the clear; pour it upon the purslain, and tie it down close; let it stand in a cool place; when you want to use them, take a few out at a time, and wash them till the water come quite clear from them;

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though they stink and look black, don't mind it; put them in cold water over the fire close covered; let them scald two hours, but not boil till they are very green; then boil vinegar, salt, pepper, and ginger; drain the stalks from the water, and put your pickles to the vinegar.

TO PICKLE ONIONS.

Take small round white onions; lay them in salt and water two days; then drain them, and dry them in a cloth; boil the best vinegar with black pepper, Jamaica spice, ginger, and salt; when cold, put them in it; you may do them with hot vinegar if you please; don't peel the onions but as you use them; because they discolour when peeled.

ANOTHER WAY TO PICKLE MUSHROOMS.

Take small button-mushrooms, and rub them clean; put them in milk and water and salt; then peel them; take them out of that, and put them in fresh water, milk, and salt to boil, put in a few cloves and onions; when they have boiled a little take them off, and take them out of that and lay them betwixt two pieces of clean flannel; take as much vinegar as you think will cover them; boil it with pepper, mace, nutmeg, and ginger; let it stand till it cool; put your mushrooms

mushrooms into wide-mouthed bottles ; pour your pickle over them, and put a little sweet oil to keep the air from them.

TO MAKE FINE GINGER-BREAD.

Take two pounds of treacle, half a pound of brown sugar, an ounce of ginger beat fine, a little Jamaica pepper, caraway-seed, and coriander half an ounce beat fine, a pound of butter ; melt your butter and treacle together ; mix it with as much flour as will make it into a very stiff paste ; cut it in what form you please ; have a pan with boiling water on the fire ; when your ginger-bread is enough, dip it into the pan, and return it into the oven for a minute, it will give it a fine gloss.

N. B. You may put in orange-peel, lemon, or citron, if you please.

SYRUP OF CLOVE GILLI-FLOWERS:

Cut off all the red part of the flowers from the white, and wet them a little with water ; put them in a jar or earthen pot, stopt and tied so tight that no air can get in ; so set it in a pan of water, and put a weight on the top to keep it from falling ; let it boil two hours ; strain out the juice to a pint ; put a pound and a half of fine sugar to it ; set it on the fire in a clean tinned sauce-pan ; stir and skim it till it begins to boil : when you put it into pots or bottles, wet a bladder with brandy, and tie it close up.

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TO CANDY VIOLETS, ROSES, GILLIFLOWERS,
OR ANY OTHER FLOWERS YOU FANCY.

Break some finest sugar into lumps, and dip them piece by piece in water, and put them to melt over the fire in a clean well tinned vessel; when it boils strain it, and set it over the fire again, and boil it till it draws in hairs; and then put in your flowers and set them in glasses, or what you chuse; when the candy is hard, break it in lumps; dry it either in a stove or in the sun, as the season is, and it will look very pretty.

TO MAKE SYRUP OF CLOVES.

Take a quarter of an ounce of cloves; beat them; take three pounds of lump-sugar, and make it into a syrup, with a quart of water; skim it; put in your cloves, with half an ounce of cochineal; boil it fifteen minutes, so strain it through a piece of muslin; let it stand till it be cold; so bottle it; it will be as good as the other.

SYRUP OF MAIDEN-HAIR.

Take maiden-hair, and infuse it as you do tea; make a strong tincture; to a pint of tincture take three pounds of white sugar candy and boil it with the tincture; let it be a very strong syrup; put in a gill of orange-flower water, and it will be exceeding good; bottle it in halfpint bottles, with bladders over the corks.

TO PRESERVE KIDNEY-BEANS TO EAT AS FRESH.

Take young kidney-beans; put them in salt and water, and shift them every day for four days; make a fresh brine in a copper pan; put in your beans; set them on a slow fire, close covered with cabbage-leaves to green; let them never be hotter than you can hold your finger in them; lay them on a searce to drain; put them on pewter-dishes to dry; then put them into a box lined with white paper: when you use them, soak them among warm water some hours; shift the water to take out the salt, and use them as you do fresh beans.

TO MAKE THE BEST USQUEBAUGH.

To two gallons of brandy, put a pound of Spanish liquorice, half a pound of raisins of the sun, four ounces of currants, some tops of thyme, balm, savory, and mint, and flowers of rosemary, of each two ounces; cinnamon and mace bruised; nutmegs, annise-seeds, and coriander-seeds bruised likewise, of each four ounces; citron or lemon, and orange-peel scrap'd, of each an ounce. Let all these infuse forty-eight hours in a warm place, often shaking them; then set them in a cool place for a week; after which decant off the clear liquor, and put to it an equal quantity of good white port, and two pints of canary; sweeten the whole with refined sugar.

TO

TO MAKE ORANGE-WINE.

Put twelve pounds of fine sugar and the whites of eight eggs, well beat, into six gallons of spring-water; boil it an hour and skim it well; when pretty cool, put in the juice and rind of fifty Seville oranges, and six spoonfuls of good barm; after it has stood two days, put it into your cask with four bottles of French white-wine, or two bottles of good mountain; some use Rhenish wine. Put in also the juice of a dozen of lemons; you must let the juice of the lemons and wine, and two pounds of double-refined sugar, stand close covered twelve hours before you put it in the cask to your orange-wine; clear off all the seeds: the lemon-peels must be put in with the oranges, half the rind put in the cask; it will be fit to bottle in ten or twelve days.

R A I S I N - W I N E.

Take two pounds of raisins ston'd; two pounds of sugar, the rind of two lemons and the juice of four; then pour on two gallons of boiling water, and let it stand in a vessel covered four or five days; strain it out and bottle it up; it will be fit to drink in four days: it is very cool and pleasant in cold weather.

C U R R A N T - W I N E.

Take four gallons of currants, not over ripe, and strip them off the stalks into an earthen vessel;

vessel; take nine quarts of water, and five pounds and a half of fine sugar; boil the sugar and water; skim it well; pour it boiling hot on the currants; let it stand forty-eight hours; then strain it through a flannel into a jar: let it stand fourteen days to settle; so bottle it.

C O W S L I P - W I N E.

Take three gallons of water and three pounds of sugar; boil it an hour and skim it; put it in a cask with the rinds of three lemons, and six quarts of cowslips pick'd from the stalks; toast a slice of loaf-bread; when cold spread some barm on it, and put it into the cask, with a square bung hole; stir it, and let it work three or four days; then tap it with a cock, with a thin cloth over it, but a basket cock is best: draw it off in another vessel, and put to it a quart of brandy and the juice of four lemons; a quarter of a pound of loaf-sugar, a quarter of a pound of ston'd raisins; bottle it after standing three weeks: some use Malaga or mountain wine instead of brandy; but this as you choose; it will keep a year in a cool place.

B I R C H - W I N E.

To four quarts of birch-water, put two pounds of loaf-sugar, the juice and rind of two Seville oranges, and a pint of French brandy; boil it half an hour; after skimming let it stand to cool and settle; put it into a clean earthen vessel, put to it a little fresh barm; let it work
twelve

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twelve hours close covered ; then turn it ; after standing six weeks, you may bottle it : it will be fit to drink in five or six weeks.

MORELLA-CHERRY WINE.

Let the cherries be quite ripe ; pick off the stalks and bruise your fruit, but don't break the stones ; put them in an open vessel together ; let them stand twenty-four hours ; press them, and to every pint put one pound of fine sugar ; put it up in your cask, and when it has done working, stop it close ; let it stand about three months and bottle it : it will soon be fit for drinking.

R A S P B E R R Y - W I N E.

Bruise your raspberries, and put them in an open pot twenty-four hours : then squeeze out the juice, and to every pint put one pound and a half of sugar, and two bottles of good mountain ; put all in a vessel, and when done working stop it close ; when it is fine bottle it : it will be fit for drinking in two months.

TO MAKE GOOSEBERRY-WINE.

To every four pounds of gooseberries, put a pound and a quarter of sugar, and a quart of pure water ; bruise the berries, and let them steep four and twenty hours in water ; take care to stir them often, press the liquor off, and put your sugar to it ; put it in a proper vessel, and when done working stop it up, and let

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let it stand a month; rack it off into another vessel, and let it stand five weeks longer; when you bottle it put a small lump of sugar in each bottle; it will be fit to drink in three months.

C Y D E R.

Have a tub with a cock or spiggot at the bottom, and put in it the one half of your apples a little bruised, and pour on them the juice of the other half; let it remain so three or four days; then draw it off into another vessel: if it is not clear, pour it on the apples again till it run fine; infuse a little isinglass in some of your cyder; which, mixt with it in the cask, will fine it down.

T O M A K E M E A D.

Into twelve gallons of water, slip the whites of six eggs, mixing them well together; and to this add twenty pounds of honey; let the liquor boil an hour, and when boil'd add cinnamon, ginger, cloves, mace, and a little rosemary; as soon as it is cold put a spoonful of barm to it and turn it up, keeping the vessel filled as it works; when it has done working stop it up close; and, when fine, bottle it off for use.

T O M A K E P E R R Y.

The best fruit for this use, are such as are least fit for eating; such as the barberry-pear, horse-

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horse-pear, boreland-pear, and chock-pear, and still the redder they are the better.

The method of preparing perry is perfectly the same with that of cyder,—only note, that the fruit must be perfectly ripe: some mix crabs with them to mend the liquor.

TO GIVE WINE A FINE FLAVOUR.

Pluck the flowers of the vine when they are just come forth and in full blossom; dry them in the shade, but by no means in the sun or a strong heat; powder and preserve them; take what quantity you please of this powder; tie it up in linen, and hang it in the cask when the new wines begin to ferment: nothing is more natural, and nothing more efficacious in giving wine a high flavour than this powder: the quintessence of the virtues of a plant lies in the flower; by drying them slowly, the evaporating subtil particles are concentrated, and they may be preserved a long time without losing the virtue: when the wine ferments, it acts on these fine particles, and the motion thereby occasioned is sufficient to mix them with the wine, which, by these means, contains all the virtues of the grapes and flowers.

N. B. Wines of no fine flavour, may be much meliorated by this method.

OF ORDERING AND FINING OF WINES.

Take half a pound of isinglass steep it in half a pint of the hardest French wine that can be

got

got, so that the wine may fully cover it; let them stand twenty-four hours; then pull and beat the isinglass to pieces, and add more wine, and four times a day squeeze it to a jelly, and as it thickens add more wine; when it is fully and perfectly jellied, take a pint or more to a hoghead; then over-draw six or eight pints of the wine you intend to fine, which mix well with the said quantity of jelly; then put this mixture into the cask of wine you intend to fine; beat it well with a forked stick or staff, and fill it top full.

N. B. French wine must be bung'd up very close, but not the Spanish; isinglass raises the lees to the top of strong wines, but in weaker precipitates them to the bottom.

The colour of claret may be mended by adding red wine, tent, or Alicante; or by an infusion of turnsole made with four pints of the wine, and then putting it into the cask well stopped and rolled for a quarter of an hour: this infusion is sometimes twice or thrice repeated, according as more colour is to be added to the wine.

Claret over red, is amended with an addition of white wine.

White wines that are brown, are thus remedied: Take some alabaster powder, over-draw six or eight pints; then put in the powder at the bung; stir and beat it well with the staff, and fill it top full; the more the wine is

K.

stirred

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stirred the finer it will come upon the lee; that is, the finer it will be.

To make sack white; take two pounds of white starch, and four pints of milk, and boil them together two hours; when cold, beat this well with a handful of white salt; then put them into the butt, and beat them well with the staff, and the wine will be pure and white.

One pound of the fore-mentioned jelly of isinglass, takes away the brownness of French and Spanish wines, mixed with five pints of wine, according as it is brown and strong, more or less to be used; then over-draw the cask about sixteen pints, and use the rod; then fill it up full, and in two or three days it will be fine and white.

The first buds of the black currants infused in wine, especially Rhenish, makes it diuretic and more fragrant in smell and taste, and so does clary; the inconveniency is, the wine becomes more heady: a secret remedy whereof are elder-flowers, viz. bown tree, added to the clary, which also improves the fragrancy.

To help brown Malagas and Spanish wines, take powder of orris-roots and saltpetre, of each four ounces; the whites of eggs, whereto add as much salt as will make a brine; put this composition into the wine, and mix them with a staff.

To meliorate muddy and tawny clarets, take of rain-water one quart, the yolks of eight
eggs,

eggs, a handful of salt; beat them well, and let them stand six hours, before you put them into the cask; then use the rod, and in three or four days it will come to itself.

To mend the taste and smell of Malaga, take of the best almonds, and, with the wine to be cured, make an emulsion; then take the whites and yolks of twelve eggs; beat them together with a handful of salt, and put them into the pipe, and use the rod

To mend the smell and taste of French and Rhenish, which are fofil, take to an aulm of the wine, of honey one pound, elder-flowers one handful, orris-powder an ounce, one nutmeg, a few cloves; boil them in a sufficient quantity of the wine to be cured, to the consumption of half; when it is cold strain and use it with the rod: some add a little salt; if the wine be sweet enough, add of spirit of wine one pound to a hog'shead, and give the cask a strong scent.

N. B. Spirit of wine makes any wine brisk, and fines it without the former mixture.

A lye of the ashes of vine branches, viz. a quart to a pipe, being beat in the wine, cures the ropishness of it; and so doth infallibly a lye of oak ashes. For Spanish ropy wine, rack it from its lees into a new-scented cask; then take allum one pound, orris-root powdered half a pound; beat them well into the wine with a staff; if the wine should also prove brown, put three bottles of milk to a pipe.

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The following mixture meliorates vitious wines both in smell and taste, especially French: Take of the best honey one part, of rain-water two parts, and one third of sound old wine of the same kind; boil them on a gentle fire to a third part, skimming them often with a clean skimmer; for which purpose, have a pail of pure water standing beside you to rince it in; let it cool, and it will mend the hard taste of the wine, by putting two pints of it to a hog-head, and using the rod; then let it rest six or eight days; if mild enough, you may add some white mustard-seed bruised.

To mend and preserve the colour of clarets, take red beet-roots a sufficient quantity; scrape and wash them clean, and cut them into small pieces; then boil them in a sufficient quantity of the same wine, to the consumption of a third part; skim it well, and, when cool, decant off what is clear, and use the rod; or, take of the wine and honey, of each two pounds, rain-water a bottle, twelve beet-roots; boil them to half, and, when cool, decant, &c. as above.

N. B. If you can get any mulberries, a few handfuls added to the mixture will be of service.

To prevent souring of French wines, take a sufficient quantity of grains of Paradise; heat them in a pan, and hang them, or put them loose into the cask: some use lavender tops.

To help sour French wines, take a sufficient quantity of good wheat, and pick out four
cunces

ounces of the best grain, and boil it in fair water till it break, and, when cold, put it into the cask in a bag, and use the rod; or take six or eight large sticks of cinnamon and bung them up well.

To help Spanish four wine, first rack it into a clean cask, and fill it up with five or six pints of water, and put in four ounces of burnt chalk, and after three or four days, it must be rack'd again and filled up with rain-water, if the first time does not do it.

The best time to rack wine is the decrease of the moon, and when the wine is free from fretting, the wind being at North-East or North-West, and not at South, the sky serene, free from thunder and lightning.

To help Malagas that will not fine, take crude tartar powdered, sifted, and dried, two pounds; mix it with the whites of six eggs, dry, powder, and sift them again; then overdraw the pipe as much as will serve to mix with this powder, and fill the pipe therewith, beating it with the staff, and this wine will be fine in ten days.

Another speedy way to fine French wines. Hang a piece of scent in the cask, and when it is burnt out, put in a pint of the best spirit of wine, and stir it about: Some add a little salt well dried; this fines the wine in twenty-four hours. Allum put into an hog's bladder keeps wine from turning flat, faint, or brown,

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and beaten with the whites of eggs, removes its ropishness.

Flat wines recover with spirit of wine, raisins, and sugar, or molasses; and sacks by drawing them on fresh lees,

Our wine-coopers of later times, use vast quantities of sugar and molasses to all sorts of wines to make them drink brisk and sparkling, and to give them a spirit, as also to mend their bad taste, all which raisins, cure, and stum perform.

TO MAKE HYPOCRAS.

Take of cardamums, carpo-balsamum, each half an ounce; coriander-seeds prepared, nutmeg, ginger, of each two ounces, and two drachms of cloves; bruise and infuse them in four pints of sherry eight and forty hours, often stirring it, and put in three pints of milk and a pound of sugar-candy, and strain it through a jelly-bag till it be fine.

TO PRESERVE CHERRIES.

If they are morella cherries, take some jelly of white currants, drawn with a little water run through a jelly-bag, about three half pints, to which put three pounds of fine sugar; set it on a quick fire, skim it, and put in two pounds of your stoned cherries; when they are tender boil them fast till they are clear; then put them in pots or glasses for use: for red cherries, take red currant-jelly, and do them the same way.

TO

TO PRESERVE RED CURRANTS.

After your currants are mashed, put them through a thin strainer; take a pint of juice, and a pound and a half of sugar, with six spoonfuls of water; boil and skim it well; then put in half a pound of stoned currants; boil them fast till they are clear and jelly; cover the pots or glasses you put them in, as you do other sweet-meats.

N. B. Stir all kinds of small fruit till they cool, to mix with the jelly.

* * White and amber currants are done the same way.

TO PRESERVE RASPBERRIES.

Put two pounds of sugar to three half pints of raspberry-juice; boil and skim it well, and then put in near a pound of large raspberries; let them boil fast to a clear jelly; a quarter of an hour will do them after they begin to boil; put the raspberries in the pots first; then strain the jelly from the seeds and put it to them: paper them as other sweetmeats.

R A S P B E R R Y - J A M.

Mash them, and strain the one half; put the juice to the other half that has the seeds in it; boil it fast for a quarter of an hour; put twelve ounces of sugar to a pint of raspberries; boil it till it jellies, and keep it for use.

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TO PRESERVE APRICOTS.

Stone and pare four dozen of the largest you can get, and cover them with three pounds of fine grated sugar: let them stand seven or eight hours; then boil them on a slow fire till clear and tender, so let them stand till the next day, covered close with a paper; then boil a quart of apple-jelly with two pounds of sugar, and whilst that is boiling make your apricots scalding hot; then put the jelly to them and boil them together, but not too fast; when the apricots rise in the jelly very well, they are done: paper them up close, as other sweetmeats,

APPLE-JELLY FOR ALL SORTS OF SWEET-MEATS.

When your apples are pared, cored and quartered, put them into boiling water, just as much as will cover them, and boil them as quick as possible: when they are all to pieces, put in a quart of water more; then boil it half an hour, and run it through a jelly-bag.

B A R B E R R Y - D R O P S.

Strip your barberries off the stalks; put to them a little water to keep them from burning; mash them when they are boiling, till they are very dry; then rub them through a hair sieve, and strain them through a strainer: when scalding hot put a pound of sugar grated to half
a pint

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a pint of the pulp; let it scald, and drop it on glasses; put it in a stove, and when it is candied turn it.

TO PRESERVE BARBERRIES.

Stone your barberries in sprigs, and for a pound of them make a syrup of a pound and a half of fine sugar, with a pint of water; let the barberries have a boil in this syrup; scald them every day for five days, but don't let them boil; put them in a pot, and when you use any, heat the rest, else they will not keep.

TO MAKE CHINA-CHIPS.

Cut the rind of China or Seville oranges very thin, in long chips; boil them tender; when drained put them into a very thick cold syrup of clarified sugar; let them lay two days, then scald them; when cold, dry them in a stove on earthen plates.

TO MAKE ORANGE DROPS.

Squeeze a dozen of oranges; boil the rinds tender; cut out the whites and beat the yellow rinds very fine; rub it through a hair sieve; put a pound and a half of fine sifted sugar to a pound of the pulp; mix it well, and make it so thin with the juice that it will drop from a teaspoon; drop it on glasses and set it by the fire; after standing two hours, put it in a stove; turn it next day, and it will be dry in four and twenty hours.

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TO CANDY ORANGE-FLOWERS.

When the flowers are full-blown, pick the white leaves, and put them an hour or two in water; then put them in boiling water and boil them till tender; drain them from the hot water, and put them into cold water till you make as much syrup of fine sugar as will cover them; put a pint of water to a pound of sugar; put in the leaves when the syrup is cold, and let them lay all night; scald them the next day, and let them lay three days in the syrup; then make another syrup thicker; when it is cold, drain the flowers from the thin syrup, and put them into the thick; let them lay two or three days; then make them just hot, and, in two days more, lay them out on glasses, spread thin, sift on fine sugar, and put them in a stove: five hours will dry them on one side; then lay them on paper, with the wet side uppermost, and set them in the stove till very near dry; then pick them asunder, and put them in a stove till they are quite dry.

TO ICE ALMOND-CAKES.

Beat a pound of almonds very fine with rose-water; mix in half a pound of sifted sugar, and make it up in long or round cakes, as you please; put them before the fire till they are dry on one side; then turn them; when dry on both sides, beat some fine sifted sugar, and as much white of egg as will just wet it; beat
it

it with a spoon, and as it grows white, put in a little more egg, till it is thin enough to ice the cakes: then ice one side; dry it before the fire, and be sure that it is dry before you ice the other side.

TO MAKE ORANGE OR LEMON PUFFS.

Grate the outside of two large oranges or lemons; beat them with a pound of fine-sifted sugar well in a mortar; grind it well with a pestle, and make it up in a stiff paste, with steep'd gum-tragacanth; beat the paste out again; roll or square it, and bake it on a cool oven on papers and tin-plates.

R A T A F I A P U F F S.

Beat half a pound of bitter almonds very stiff, with a pound and a half of sifted sugar; make it up to a stiff paste with whipt whites of eggs; after it is well beat in a mortar, make it up in little loaves; then bake them in a very cool oven on paper and tin plates.

C H O C O L A T E P U F F S.

Grate three ounces of chocolate; sift it through a hair sieve; add a pound of fine sifted sugar to it; make it up with whipt whites of eggs into a paste; beat it very well in a mortar, and make it up in what fashion you please; and bake it as the others.

R A T A F I A D R O P S.

Beat half a pound of butter and half a pound of sweet almonds very fine, with rose water; mix a pound of sifted sugar, with the whites of five eggs, beat to a froth; set them on a slow fire; stir them till they begin to be stiff; when quite cold, make them in little round drops; bake them as before.

SUGAR PUFFS OF ALL SORTS.

Make up some very fine sifted sugar into a paste, with gum-tragacanth well dissolved in rose-water; beat it in a mortar; squirt it and bake it in a cool oven; colour what you design red with carmine; blue with powder blue; yellow with gambouge; a yellow and blue mixed will make green.

TO MAKE ALL SORTS OF FRUIT CREAM.

Take scalded fruit, or sweetmeats; rub it through a hair sieve; boil your cream; when it is cold, put in your fruit till it is pretty thick.

A GOOD SACK POSSET.

Beat the yolks of twelve eggs, and the whites of six; put to that a pint of sack, or what wine you choose, with half a pound of sugar; keep them stirring till they turn white and begin to thicken; boil a quart of cream on another fire, and pour it into the eggs and wine; stir it round,

round, and let it stand fifteen minutes before you eat it.

TO CANDY ANY FLOWERS OR GREENS
IN BUNCHES.

Wet your flowers with some fine gum-water; dry them by shaking them in a cloth; then dip them in fine sifted sugar, and hang them on a string a-cross the grate to dry; let them hang a few days, that they may be quite dry.

TO SUGAR ALL SORTS OF SMALL FRUIT.

Dip the fruit in the white of an egg well beat; let it lye on a cloth, that it may not wet: then roll the fruit in fine sifted sugar till it is quite covered over with the sugar; dry it well in a stove, or before the fire; it will keep a week.

TO SCALD ALL SORTS OF FRUIT.

Put the fruit into scalding water, as much as will almost cover your fruit; set it over the fire till it is tender; turn the fruit when the water does not cover it; when very tender, lay a paper close to it, and let it stand till it is cold; put half a pound of sugar to a pound of fruit, and let it boil till it looks clear: all fruit should be done whole but pippins, they are best quartered, with a little orange-peel and lemon-juice put in them.

TO MAKE CURRANT CLEAR CAKES.

After your currants are stript and washed, take four quarts of them, and put to that a quart of fair water; boil it well, and run it through a jelly-bag; put a pound and a half of sifted sugar to a pint of jelly; let your jelly just boil; shake in the sugar, stirring it well, and make it scalding hot; put it through a strainer in a broad pan, to take off the scum, and fill it in pots; when candied, turn it on a glass-plate till one side is dry; then turn and dry the other side.

RASPBERRY CLEAR CAKES:

Take half raspberries, half white currants, and cover them almost with water; boil them well fifteen minutes, and run them through a jelly-bag; for each pint of jelly, have ready a pound and a half of fine sifted sugar; when your jelly boils, shake in your sugar, and stir it well, and set it on the fire till it is melted; strain it in a broad pan to prevent the scum, and dry it as before directed.

RASPBERRY DROPS.

Mash the berries; put in a little water; boil and strain them; then take half a pound of fine sifted sugar; wet the sugar to make it as thick as paste; make it scalding hot; drop it on your paper; it will soon dry.

N. B. Some persons chuse to put in a few drops of spirit of vitriol.

ORANGE

ORANGE OR LEMON CLEAR CAKES.

Run a quart of pippin jelly through a bag, and take the meat of four oranges; boil them together, and rub it again through a jelly bag; then take half a gill of orange-juice and a quarter of a pound of fine sugar; boil it, and put it in your jelly, with the rind of an orange well boiled and finely shred; make them scalding hot together; to a pint of jelly, take a pound and a half of sugar; boil the sugar to a candy; then put in your jelly, but not all; as soon as done boiling, put in the remainder of your jelly; set it over the fire till the candy is all melted; but take care it does not boil; dry it as before.—Lemons are done the same way.

A GOOD GREEN FOR COLOURING
CLEAR CAKES.

Put an ounce of gambouge in a quarter of a gill of water to melt; dissolve an ounce and half of stone-blue; mix the two colours with four ounces of fine sugar, and a little more water, and let it boil; a spoonful of this will give a fine green to a pint of clear cake of the white sort.

TO MAKE A MARMALADE OF CHERRIES.

Boil a pound of sugar, and take a pint of stoned cherries and boil them with the sugar; then take a pint and a half of currant-jelly and put to it; boil it some time, and put it in glasses.

MARMALADE OF CURRANTS.

When picked and clean, put them in a pan, with their weight of sugar; let them boil to a strong jelly, and put it in pots: This is for red currants; white ones must be well bruised, and rubbed through a coarse sieve.

TO MAKE MACARONI.

Make some flour into a paste with two eggs; roll it out thin, and cut it like straws, about an inch and an half long; boil a pint of milk, and the same quantity of cream, in a stew-pan; part the paste bit from bit, and put it in; let it boil to the thickness of cream, stirring it to keep it from sticking to the pan; sweeten to your taste, and strew on some fine beat cinnamon sifted: garnish with Seville orange.

TO BURN ALMONDS.

Crisp a pound of Jordan almonds before a hot fire, or in an oven; take twelve ounces of sugar, one ounce of grated chocolate, and half a gill of water; boil these almost to a candy; then put in the almonds, and let them be just hot; take them off and stir them, till the sugar grows dry, and hangs about the almonds; turn them out of the pan on a paper, and put them asunder.

TO MAKE ITALIAN BISCUIT.

Mix a pound of double-refined sugar, beat and sifted, with a pound of the finest flour you
can

can get; beat six eggs very well; and strain them through a sieve; put them into a marble mortar; put in some of your flour and sugar, and beat it very well; so put in the rest little by little, till all be in; you must beat it an hour without ceasing; then put a sheet of wafer-paper on a plate of tin; drop on the biscuit; strew on some confectioned carvie, and bake them off as quick as you can.

TO BOTTLE GOOSEBERRIES.

Take such as are three parts grown; pick off the tops and stalks; boil some hard water in a pan, and take it off the fire, and put in your berries; let them lay till they are white, only be careful they don't crack; strain them in a cullender; lay them on a coarse cloth, and cover them with another; let them lay till they be cold; bottle them, and stamp the bottle on something soft to settle them; cork them tight, and dip the necks of the bottles in melted rosin, and keep them in a cool place.

OF CANARY-BIRDS.

Canary-birds that are kept tame, will breed three or four times in the year; they usually begin in April and breed in May and June, though sometimes in July and August: Towards the middle of March begin to match your birds, putting one cock and one hen in a small cage; and when they have been so long together that they are perfectly reconciled and

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well pleased with each other, towards the end of March or the beginning of April, put them into the breeding-cage for that use; let it be full large, so that the birds may have the more room to fly and exercise themselves; let there be two boxes in the cage for the hen to build in; because she will sometimes hatch a second brood before the first are fit to fly, leaving the care of them to the cock, to feed and bring them up, whilst she breeds in the other box; therefore, if she has not a spare box to build in, she will be apt to make her nest upon the birds (as it sometimes happens) and smother them, or build so near, that they will spoil one another. Whilst your birds are a-pairing, feed them with soft meat, egg, bread, maw-feed and a little scalded rapeseed, hardly a third part of egg; this last and the bread grated fine, and so mix it all together. When they have young ones, give the same soft victuals fresh every day, and let them have fresh greens likewise, such as cabbage-lettuce now and then; but give them more constantly chickweed with seeds upon it; towards June shepherd's-purse, in July and August plantain, and before they have young ones give them groundsoil with feed upon it. I would recommend to such persons as breed only a few birds for their diversion, to use very large cages, it being much the best way; but those who intend to breed a number, should prepare a room for that purpose.

Let

Let the situation of it be such, that the birds may enjoy the benefit of the morning sun, which is both delightful and nourishing; and let wire, instead of glass, be at the windows, that they may have the advantage of the air, which will add to their health and make them thrive the better; keep the floor of the room clean, sometimes sifting fine dry gravel or sand upon it, and often removing the dung and other foul stuff: You must take care to fix nest-boxes, and back cages in every convenient corner and place of the room, at least twice the number that you have of birds, that they may have the more variety to choose a lodging to their minds; for some love to build high, and some very low; some in a light place, and others will choose a dark place to build in.

There ought to be two windows in the room, one at each end, and several perches at proper distances, for the birds to settle upon as they fly backwards and forwards.

You may set likewise a tree, in some convenient part of the room; it will divert the birds, and some of them will like to build in it: you must observe that their nest is secure from falling through, and if in danger, to tie the tree closer to prevent it, and they will hatch there as well as in any other place. Remember not to put too many birds together; eight or ten pairs are enough for a middling room: When your birds are first paired, as directed before, turn them into the room, where they will

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will live, as it were, a conjugal life; and notwithstanding there are several male and female birds in the same room, one cock and one hen, as they first coupled together, will keep constant to each other, and both concur and assist in sitting and feeding their young; for the cock-bird takes his turn in building the nest, sitting upon the eggs, and feeding the young, as well as the hen.

OF THEIR NESTS, AND HOW TO ORDER THEIR YOUNG.

You must furnish the birds with stuff for making their nests, such as fine hay, wool, cotton and hair; let these materials be thoroughly dry; then mix and tie them up together in a net, or some such thing, so that the birds may easily pull it out as they want it, and let it be hung in a proper place in the room for that purpose.

They build a pretty nest, about which they will sometimes be so industrious, as to begin and finish it in one day, though they are generally two or three days in making their nest; the hen lays commonly four or five eggs, and sits fourteen days.

When the young are hatched, leave them to the care of the old ones to nurse and bring up, till they can fly and feed themselves. The hen, as I said before, by reason of their rankness in being kept together, and provided with all things necessary at hand, without any trouble
in

in seeking their food, &c. will sometimes build and hatch again before the first can shift for themselves; the care of which she transfers to the cock-bird, who will feed and nurse them himself, supplying the part of both parents, while she brings on and attends her new progeny: But it is not so with those birds that live at large in the fields; they observe their season for breeding, and after they have hatched, company with the brood till their young are grown up, and able to provide for themselves.

When the young Canary-birds can feed themselves, take them from the old ones and catch them; if they are flying about the room to catch them, bring a spare cage with some soft victuals in it, taking the other meat that is in the room away, and placing the cage there in its stead, with the door open and a string fastened thereto; then stand at a distance, and the old ones will presently, for the sake of the meat, intice the young ones into the cage; then pull the string, and shut in as many as you can, and cage them.

Let their meat be the yolk of an egg hard boiled, with as much of the best bread, and a little scalded rapeseed; when it is boiled soft, bruise the seed fine, and put a little maw-seed amongst it, and mix it all together, and give them a sufficient quantity fresh every day; never let it be stale or sour: Besides this, give them a little scalded rape-seed, and a little rape
and

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and Canary by itself. You may keep them to this diet till they have done moulting, and afterwards feed them as you do the old ones, taking away their soft meat, unless at any time they are sick, then continue it.

THE ART OF NURSING, BREEDING, AND ORDERING OF THE SILK-WORM.

All ye gentle dames attend my song,
To you the matter and the verse belong;
Hence learn th' improvement of your lov'd attire,
Your's is the work, and you the bard inspire.

VIDA'S Poem ON SILK-WORMS.

The silk-worm, we find, was first brought to Constantinople by two monks who were sent by the Emperor Justinian to Persia to find out the method how the silk trade was managed there, as he was highly disgusted at his subjects buying it at so dear a rate; but on their return they informed the Emperor of the impossibility of preserving the insects alive; therefore, by the Emperor's desire, they made a second journey, and brought a quantity of their eggs in a roll of parchment, with directions how to breed and feed them when hatched from thence, and how to obtain silk from them.

From so small a beginning all Europe, in some measure, has reaped advantage of the silk manufacture.

From

From hence to some whole tides of riches flow,
And hoarded gains to countless treasure grow.

• • • • •
Houſe them ſecure, and in your care be wiſe;
Slight is the labour, but not ſo the prize;
Short is the time before the ſilken ſpoil,
Shall in full glittering heaps reward thy toil.



This insect is hatched from an egg, about the ſize of a grain of muſtard-ſeed, and of a liver colour; the worm is perfectly black, and when it firſt comes out, though its head is of a deeper ſable than any other part, in a few days it grows whitish, or of an aſh grey colour, and as the ſkin at that time appears dirty and ruffled, it caſts it off and aſſumes a new dreſs, it then grows bigger and ſomething whiter, inclining to green; when they once begin to gather ſtrength, they faſten themſelves on mulberry leaves, which muſt be the ſoſteſt, and gathered in dry weather, and muſt be diſpoſed ſo as to ſecure them from wind or damps of any kind, for any impurity whatever will kill the ſilk-worm: As ſoon as this insect is laid on the leaves it faſtens on them, and ſo paſſes from one to another, eating to the very laſt hour of its moulting; and from the inſtant it begins to eat, it has a thread, by which it faſtens itſelf as occaſion requires, and prevents the inconveniency that might attend a fall.

After

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After a few days that varies in proportion to the heat, or complexion of the creation, and the nature of its provisions, the worm declines eating, and sleeps near two days, then falls into a sort of convulsions, and grows almost red with those violent agitations, it then casts its second skin, grows wrinkled and rough, and assumes a third dress, which is very beautiful to the eyes, and it being quite recovered of its sickness takes to eating again.

Between the heart and the lungs lie the ventricle and the intestines, where the digestion is performed, and all those vessels are surrounded with a great variety of turnings and windings by a little long bag, containing a sort of gum, of the colour of a marigold, with which this insect spins its silk. Under its mouth are two holes, through which this gum distills in proper quantities, and they, like two distaffs, constantly furnish the creature with materials for spinning her thread: This gum receives its form, and is extended in a double thread, which she unites by glewing them one over another with her fore-feet.

This insect after its spinning time, is transformed to an aurelia, or chrysalis, in shape of a small plum, in which shape it lies shut up in hot countries, for fourteen or fifteen days; in more temperate, eighteen or twenty, without food or air: During this inclosure within a case of its own spinning, it casts off two coats, both that of the worm, when it is changed in-

to an aurelia, and that of the aurelia, when it becomes a moth; in its case, and just before it comes out with head, legs, wings, horns, &c. which passage is made by itself with a whitish water it casts on the silk, which so softens the case at the sharp end, that the little creature is able to eat a hole through it as big as itself; this last changes into a moth, being the perfection of the silk-worm; the males and females immediately couple, and continue in that state eight or ten hours; the male dies soon after, and the female shares the same fate when she has laid her eggs; these eggs however are of so hard a nature, as to be kept for ten months in the year as a dead thing, and take life in the spring to renew their parents kind, of which Vida sings,

Learn first their close of life, 'tis finished soon,

Nor e'er exceeds the third revolving moon;

Childless they die, this dismal fate all find,

And ev'ry winter sees th' extinguish'd kind;

Yet still the name subsists, a brood succeeds,

Nor can death triumph o'er th' eternal seeds.

For when the silk-worm fails, a yearly race

Renew the kind; and takes the parents place.

These eggs that appear yellow must be thrown away as useless; preserve none but those of a liver-colour, and in order to save your eggs, you must begin with a needle and

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thread

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thread to couple the male and female bottoms, taking care to do this so gently on one side only as not to injure the chrysalis; (which may happen if you run the needle through the bottom) then hang them up out of the power of vermin, and when the aurelia is turned into a moth and eat its way out; take it by the wings, and set it on a shelf, that the male and female may couple together. The male has a lesser body, broader horns, and flutters oftner and stronger with its wings than the female. During their copulation, provide a piece of lawn or linen, or fine paper, and put the coupled moths upon it; here the female will lay her eggs, which are of a pale yellow, but will turn in a few days of a liver-colour, if good: She being dead, take them off the stuff carefully with the point of a knife; (as practised by some) but it is better to take the linen or paper and put them into an earthen pot, which must be kept in a temperate place in summer, in winter put them in a box amongst woollens till the May following, according to the directions of Vida.

Left the younglings come before their time,
And fall by cold or famine, by thy crime;
Bring not the hidden seeds to sight of day,
Whilst leafless trees their naked arms display,
Till deck'd with flowers the smiling meads are seen,
And budding mulberries are cloathed in green:

Thes

These plants the swains observe, and as they grow,
 The times distinguish, and the season know;
 When blooming leaves the spreading boughs adorn,
 Then blossoming open to the ruddy morn,
 Joyous they learn the hoary winter's past,
 The frozen waters and the dreadful blast;
 For corn or cattle, they no longer fear
 The boist'rous danger of th' inclement year.
 The changing seasons of the moon remain
 To be observ'd: Avoid the dang'rous wain,
 Nor chuse the time when she new dips her horn,
 And paler light her humid face adorn;
 But when full orb'd, swell'd with her brother's blaze,
 She mounts the skies, and dares to meet his rays;
 Then bring them forth, then hatch the tender breed,
 The waxing light adds vigour to the seed:
 The moon propitious, and the favouring sky,
 With greater strength the new-born worms supply;
 Next how to hatch them, and by what devise;
 The art is curious and the method nice:
 Some to the warming sun their eggs display,
 Till from their cells the younglings force their way.
 Be thou advis'd; thy bosom be their nest;
 Wrapt close beneath thy garments let them rest.
 Nor need thou blush beneath thy breasts to hide,
 If on their glossy web thou build'st thy pride;
 Ere the third sun the gloom begins to clear,
 New dawning lives in wondrous forms appear.

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In hatching the silk-worm take great care to be well provided with mulberry leaves, sufficient to support such a number of worms as you intend to breed. The silk-worms produced from an ounce of eggs are supposed to eat, in the whole time of feeding, from two to three hundred pounds weight of mulberry leaves, when the mulberry tree begins to bud, which is about the end of April or beginning of May.

Those who do not choose to follow the above method, must take care to keep them continually warm, either in the sun or upon a hearth where they may receive a moderate heat from the fire, for three days without looking at them, for fear the cold air may injure them; and if there be no appearance of any being hatched, continue them warm two or three days longer, and then without doubt you will find some hatched, which must not be separated from the eggs that are not hatched, but put together with them into a deal box. This is to be understood of those only that are hatched in lawn or linen bags, for such as are hatched in boxes are to be separated from the eggs that are not hatched by the following method: As fast as the worms hatch take a feather or hair pencil, wet it a little, and just touch the worm, and it will stick to it, and by this method remove them to the boxes prepared for nursing them in.

APPENDIX.

APPENDIX.

Of the means of taking casts and impressions, from figures, busts, medals, leaves, &c.

THE method of taking casts of figures and busts, as at present practised, is most generally by the use of plaster of Paris; or, in other words, alabaſter calcined by a gentle heat. The advantage of using this substance preferably to others, consists in this, that notwithstanding a slight calcination reduces it to a pulverine state, it becomes again a tenacious and cohering body, by being moistened with water; and afterwards suffered to dry; by which means either a concave or convex figure may be given by a proper mold or model to it when wet, and retained by the hardness it acquires when dry: and from these qualities,

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it is fitted to the double use of making both casts, and molds for forming those casts. The plaster is to be had ready prepared of those, who make it their business to sell it, and the only care is to see that it is genuine.

The particular manner of making casts depends on the form of the subject to be taken. Where there are no projecting parts, it is very simple and easy; as likewise where there are as such form only a right or any greater angle with the principal surface of the body: but where parts project in lesser angles, or form curves inclined towards the principal surface of the body, the work is more difficult. I shall therefore first explain those particulars of the manner, which are general to all kinds; and then point out the extraordinary methods to be used where difficulties occur.

The first step to be taken is, the forming the mold; which is, indeed, done by much the same means, as the cast is afterwards made in it. In order to this, if the original or model be a bass-relief, or any other piece of a flat form, having its surface first well greased, it must be placed on a proper table, or other such support; and surrounded by a frame, the sides of which must be at such a distance from it, as will allow a proper thickness for the sides of the mold. A due quantity of the plaster, that is, what will be sufficient to cover and rise to such a thickness as may give sufficient strength to the mold, as also to fill the hollow,
be-

betwixt the frame and the model, must be moistened with water, till it be just of such consistence as will allow it to be poured upon the model; which should be done as soon as possible: for it must not be delayed after the water is added to the plaster, which would otherwise concrete or set, so as to become more troublesome in the working, or unfit to be used. The whole must then be suffered to remain in this condition, till the plaster has attained its hardness; and then the frame being taken away, the preparatory cast or mold thus formed may be taken off from the subject intire.

Where the model or original subject is of a round or erect form, a different method must be pursued; and the mold must be divided into several pieces: or if the subject consists of detached and projecting parts, it is frequently most expedient to cast such parts separately; and afterwards to join them together.

Where the original subject or model forms a round, or spheroid, or any part of such round, or spheroid, more than one half, the plaster must be used without any frame to keep it round the model; and must be tempered with water, to such a consistence, that it may be wrought with the hand like very soft paste; but though it must not be so fluid, as when prepared for flat-figured models, it must yet be as moist as if compatible with its cohering sufficiently to hold together: and being thus
pre-

prepared, it must be put upon the model, and compressed with the hand, or any flat instrument, that the parts of it may adapt themselves, in the most perfect manner, to those of the subject, as well as be compact with respect to themselves. When the model is so covered to a convenient thickness, the whole must be left at rest till the plaster be set and firm, so as to bear dividing without falling to pieces, or being liable to be put out of its form by slight violence; and it must then be divided into pieces, in order to its being taken off from the model, by cutting it with a knife, or with a very thin blade; and being divided, must be cautiously taken off, and kept till dry: but it must be always carefully observed, before the separation of the parts be made, to notch them cross the joints, or lines of the division, at proper distances, that they may with ease and certainty be properly conjoined again; which would be much more precarious and troublesome without such directive marks. The art of properly dividing the molds, in order to make them separate from the model, constitutes the greatest object of dexterity and skill in the art of casting; and does not admit of rules for the most advantageous conduct of it in every case: but I shall endeavour to explain the principles on which it depends, in such manner, that by a due application of them, all difficulties may at any time be surmounted, and an expertness even of manner acquired by
a little

a little practice. With respect to the case in question, where the subject is of a round or spheroidal form, it is best to divide the mold into three parts, which will then easily come off from the model: and the same hold good of a cylinder or any regular curve figure.

The model being thus formed and dry, and the parts put together, it must be first greased and placed in such a position that the hollow may lie upwards, and then filled with plaster commixt with water, in the same proportion and manner as was directed for the casting the mold; and when the cast is perfectly set, and dry, it must be taken out of the mold and repaired, where it is necessary; which finishes the whole operation.

This is all that is required with respect to subjects, where the surfaces have the regularity above mentioned; but where they form curves which intersect each other, the conduct of the operation must be varied with respect to the manner of taking the cast of the mold from off the subject or model; and where there are long projecting parts, such as legs or arms, they should, as was observed before, be wrought in separate casts.

The method of dividing properly the molds cannot be reduced, as I intimated, to any particular rules; but must depend in some degree on the skill of the operator, who may easily judge from the original subjects, by the means here suggested, what parts will come off together,

gether, and what require to be separated: the principle of the whole consists only in this, that where *under-workings*, as they are called, occur, that is, where ever a streight line drawn from the basis or insertion of any projection, would be cut or crossed by any part of such projection, such part cannot be taken off without a division; which must be made either in the place where the projection would cross the streight line; or, as that is frequently difficult, the whole projection must be separated from the main body, and divided also length-ways into two parts; and where there are no projections from the principal surfaces, but the body is so formed as to render the surface a composition of such curves, that a streight line being drawn parallel to the surface of one part would be cut by the outline, in one or more places, of another part, a division of the whole should be made, so as to reduce the parts of it into regular curves, which must then be treated as such.

Where detached parts of a long form, as legs, arms, spears, swords, &c. occur in any figure, they should be cast in separate molds; and if such parts are of a compound structure, the same rules, as was before intimated, must be observed in the management of them, as are already directed for the principal part.

In larger masses, where there would otherwise be a great thickness of the plaster, a corps or body may be put within the mold, in order

to produce a hollow in the cast; which both saves the expence of the plaster, and renders the cast lighter.

This corps may be of wood, where the forming a hollow of a streight figure, or such as is conical with the basis outward, will answer the end; but if the cavity require to be round, or of any curve figure, the corps cannot be then drawn while intire; and consequently should be of such matter as will suffer itself to be taken out piece-meal. In this case, therefore, the corps is best formed of clay, which must be worked upon wires to give it tenacity, and suspended in the hollow of the mold, by cross-wires lying over the mouth; and when the plaster is sufficiently set to bear handling, the clay must be picked out by a proper instrument.

Where it is desired to render the plaster harder, the water with which it is tempered should be mixed with parchment size prepared as below directed, which will make it very firm and tenacious.

In the same manner, figures, busts, &c. may be cast of lead, or any other metal, in the molds of plaster; only the expence of plaster, and the tediousness of its becoming sufficiently dry, when in a very large mass, to bear the heat of melted metal, render the use of clay, compounded with some other proper materials, preferable where large subjects are in question. The clay, in this case, should be washed

washed over till it be perfectly free from gravel or stones, and then mixed with a third or more of fine sand to prevent its cracking; or, instead of sand, coal ashes sifted till they be perfectly fine is preferable. Whether plaster, or clay, be used for the casting in metal, it is extremely necessary to have the mold perfectly dry; otherwise, the moisture, being rarified, will make an explosion, that will blow the metal out of the mold, and endanger the operator, or at least crack the mold in such manner as to frustrate the operation. Where the parts of a mold are larger or project much, and consequently require a greater tenacity of cohesion of the matter they are formed of to keep them together; flocks of cloth, prepared like those designed for the paper hangings, or fine cotton pluckt or cut till it is very short, should be mixt with the ashes or sand before they be added to the clay to make the composition for the mold. The proportion should be according to the degree of cohesion required; but a small quantity will answer the end, if the other ingredients of the composition be good; and the parts of the mold properly linked together by means of the wires above directed.

There is a method of taking casts in metals from small animals, and the parts of vegetables, which though not much known or used in this country, may be nevertheless practised for some purposes with advantage; particularly for the decorating grottoes or rock work,
where

where nature is imitated The proper kinds of animals are lizards, snakes, frogs, birds, or insects; the casts of which being properly coloured will be exact representations of the originals.

This is to be performed by the following method. A coffin or proper chest for forming the mold, being prepared of clay, or four pieces of boards fixed together, the animal or parts of vegetables, must be suspended in it by a string; and the leaves, tendrils, or other detached parts of the vegetables, or the legs, wings, &c. of the animals, properly separated and adjusted in their right position by a small pair of pincers, and a due quantity of plaster of Paris, and calcined talc, in equal quantities, with some alumen plumosum, must then be tempered with water to the proper consistence for casting; and the subject from whence the cast is to be taken, as also the sides of the coffin moistened with spirit of wine.

The coffin or chest must be then filled with the tempered composition of the plaster, and talc, putting, at the same time, a piece of straight stick or wood to the principal part of the body of the subject, and pieces of thick wire to the extremities of the other parts, in order, that they may form, when drawn out after the matter of the mold is properly set and firm, a channel for pouring in the melted metal, and vents for the air, which otherwise by the rarefaction it would undergo from the

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heat

heat of the metal, would blow it out or burst the mold. In a short time the plaster and talc will set and become hard; when the stick and wires may be drawn out, and the frame or coffin in which the mold was cast, taken away; and the mold must then be put first into a moderate heat, and afterwards, when it is as dry as it can be rendered by that degree, removed into a greater; which may be gradually increased till the whole be red hot. The animal, or part of any vegetable, which was included in the mold, will then be burnt to a coal; and may be totally calcined to ashes, by blowing for some time gently into the channel and passages made for pouring in the metal, and giving vent to the air; which will, at the same time that it incinirates the remainder of the animal or vegetable matter, blow out the ashes. The mold must then be suffered to cool gently, and will be perfect: the destruction of the substance of the animal or vegetable, having produced a hollow of a figure correspondent to it; but it may be nevertheless proper to shake the mold, and turn it upside down, as also to blow with the bellows into each of the air vents, in order to free it wholly from any remainder of the ashes; or, where there may be an opportunity of filling the hollow with quicksilver without expence, it will be found a very effectual method of clearing the cavity, as all dust, ashes or small detached bodies, will necessarily rise to the surface

surface of the quicksilver; and be poured out with it. The mold being thus prepared, it must be heated very hot when used, if the cast be made with copper or brass; but a less degree will serve for lead or tin; and the matter being poured in, the mold must be gently struck; and then suffered to rest till it be cold; at which time it must be carefully taken from the cast; but without the least force, for such parts of the matter as appear to adhere more strongly, must be softened by soaking in water, till they be intirely loosened, that none of the more delicate parts of the cast may be broken off or bent.

Where the *alumen plumosum*, or talc, cannot be easily procured, the plaster may be used alone; but it is apt to be calcined by the heat used in burning the animal or vegetable from whence the cast is taken, and to become of too incohering and crumbly a texture: or for cheapness Sturbridge clay, or any other potters or other good clay, washed over till it be perfectly fine, and mixed with an equal part of sand and some flocks cut small, may be employed. Pounded pumice stone and plaster of Paris, taken in equal quantities and mixed with washed clay in the same proportion, is said to make excellent molds for this and parallel uses.

Casts of medals, or such small pieces, as are of a similar form, may be made in plaster, by the method directed for bass relieves. Indeed

there is nothing more required than to form a mold by laying them on a proper board; and, having surrounded them by a rim made of a piece of a card or any other pasteboard, to fill the rim with soft tempered plaster of Paris; which mold when dry, will serve for several casts. It is nevertheless a better method to form the mold of melted sulphur, which will produce a sharper impression in the cast, and be more durable than those made of plaster.

The casts of medals are likewise frequently made of sulphur; which being melted, must be treated exactly in the same manner as the plaster.

Casts may be made, likewise, with iron with very little additional trouble, provided it be prepared in the following manner.

“ Take any iron bar, or piece of a similar
 “ form; and, having heated it red hot, hold
 “ it over a vessel containing water; and touch
 “ it very slightly with a roll of sulphur;
 “ which will immediately dissolve it, and make
 “ it fall in drops into the water under it. As
 “ much iron as may be wanted being thus
 “ dissolved, pour the water then out of the
 “ vessel, and pick out the drops formed by
 “ the melted iron from those of the sulphur,
 “ which contain little or no iron, and will be
 “ distinguishable from the other by their co-
 “ lour and weight.”

The iron will, by this means, be rendered so fusible, or easy to be melted, that it will

run with less heat than will melt lead, and may be employed for making casts of medals, and many other such purposes, with great convenience and advantage.

Impressions of medals, having the same effect as casts, may be made also of isinglass glue by the following means. Melt the isinglass, beaten as when commonly used, in an earthen pipkin, with the addition of as much water as will cover it, stirring it gently till the whole be dissolved. Then, with a brush of camel's hair, cover the medal; which should be previously well cleansed and warmed, and then laid horizontal on a board or table greased in the part around the medal. Let them rest afterwards till the glue be properly hardened; and then, with a pin, raise the edge of it, and separate it carefully from the medal; the cast will be thus formed by the glue as hard as horn, and so light, that a thousand will scarcely weigh an ounce. In order to render the relief of the medal more apparent, a small quantity of carmine may be mixed with the melted isinglass: or the medal may be previously coated with leaf gold by breathing on it, and then laying it on the leaf, which will by that means adhere to it; but the use of the leaf gold is apt to impair a little the sharpness of the impression.

There is likewise a method of making impressions of the same kind in lead; which is this. Lay the medal on a post, or other firm

body of wood, and cover it with a piece of very thin plate of lead; and lay over that another piece of thicker plate. Then place on them end-ways, a piece of wood turned of a round figure; which may be a foot or more in length, and of such thickness, that its diameter may be somewhat greater than that of the medal. Strike then forcibly on the upper end of the wood with a mallet, or some such instrument; and the undermost plate of lead will receive the impression of the medal; to preserve which, the concave of the reverse may be filled up with resin, mixed with an equal part of brick-dust, and melted. The impression should be made with one stroke, which will produce a sufficient effect, if given with due strength, and in a perpendicular direction. Impressions may be even taken from sealing wax or sulphur in this manner, if the pieces be no way concave or bending on their under side.

Impressions of medals may be likewise taken in putty; but it should be the true kind, made of earth of tin and drying oil. These may be formed in the molds previously taken in plaster or sulphur, or molds may be made in its own substance, in the manner directed for those of the plaster. These impressions will be very sharp and hard; but the greatest disadvantage that attends them, is their drying very slowly, and being liable in the mean time to be damaged,

Impressions of prints, or other engravings, may be taken from copper-plates by cleaning them thoroughly, and pouring plaster upon them; but the effect, in this way, is not strong enough for the eye; and therefore the following method is preferable, where such impressions on plaster are desired.

Take vermilion, or any other coloured pigmen, finely powdered, and rub it over the plate. Then pass a folded piece of paper, or the flat part of the hand, over the plate to take off the colour from the lights or parts where there is no engraving. The proceeding must then be the same, as where no colour is used. This last method is also applicable to the making impressions of copper-plates on paper with dry colours; for the plate being prepared as here directed, and laid on the paper properly moistened, and either passed under the rolling-press, or any other way strongly forced down on the paper, an impression of the engraving will be obtained.

Impressions may be likewise taken from copper-plates, either on plaster or paper, by means of the smoke of a candle or lamp; if, instead of rubbing them with any colour, the plate be held over the candle or lamp, till the whole surface become black, and then wiped off by the flat of the hand, or paper.

These methods are not, however, of very great use in the case of copper-plates; except where impressions may be desired on occasions
where

where printing ink cannot be procured; but as they may be applied likewise to the taking impressions from snuff-boxes, or other engraved subjects, by which means designs may be instantly borrowed by artists or curious persons, and preserved for any use, they may in such instances be very useful.

The expedient of taking impressions by the smoke of a candle or lamp may be employed, also for botanical purposes in the case of leaves; as a perfect and durable representation of not only the general figure, but the contexture and disposition of the larger fibres, may be extemporaneously obtained at any time. The same may be, nevertheless, done, in a more perfect manner, by the use of linseed oil, either alone, or mixed with a small proportion of colour, where the oil can be conveniently procured; but the other method is valuable on account of its being practicable at almost all seasons, and in all places, within the time that the leaves will keep fresh and plump. In taking these impressions, it is proper to bruise the leaves, so as to take off the projections of the large ribs, which might prevent the other parts from plying to the paper.

Leaves, or also the petals, or flower leaves of plants, may themselves be preserved on paper, with their original appearance, for a considerable length of time, by the following means. Take a piece of paper, and rub it over with the isinglass glue treated as above

directed

directed for taking impressions from medals; and then lay the leaves in a proper position on the paper. The glue laid on the paper being set, brush over the leaves with more of the same, and that being dry likewise, the operation will be finished, and the leaves so secured from the air and moisture, that they will retain their figure and colour much longer than by any other treatment.

Butter flies, or other small animals of a flat figure, may also be preserved in the same manner.

Of Japanning in general.

BY japanning is to be here understood the art of covering bodies by grounds of opake colours in varnish; which may be either afterwards decorated by paintings or gilding, or left in a plain state. This is not at present practised so frequently on chairs, tables, and other furniture of houses, except tea-waiters, as formerly: but the introduction of it for ornamenting coaches, snuff-boxes, and skreens, in which there is a rivalship betwixt ourselves and the French, renders the cultivation and propagation of this art of great importance to commerce. I shall therefore be more explicit in shewing the methods both now and formerly

ly in use; with the application of each to the several purposes to which they are best adapted and point out at the same time several very material improvements, that are at present enjoyed only by particular persons; or not at all hitherto brought into practice.

The substances which admit of being japanned are almost every kind that are dry and rigid, or not too flexible; as wood, metals, leather, and paper prepared.

Wood and metals do not require any other preparation, but to have their surfaces perfectly even and clean; but leather should be securely strained either on frames, or boards, as its bending or forming folds would otherwise crack and force off the coats of varnish; and paper should be treated in the same manner, and have a previous strong coat of some kind of size; but it is rarely made the subject of japanning till it is converted into *papier machè*, or wrought by other means, into such form that its original state, particularly with respect to flexibility, is lost.

One principal variation in the manner of japanning is, the using or omitting any priming or under-coat on the work to be japanned. In the older practice, such priming was always used; and is at present retained in the French manner of japanning coaches and snuff-boxes of the *papier machè*; but in the Birmingham manufacture here, it has been always rejected. The advantage of using such priming or undercoat

coat is, that it makes a saving in the quantity of varnish used, because the matter of which the priming is composed fills up the inequalities of the body to be varnished, and makes it easy, by means of rubbing and water-polishing, to gain an even surface for the varnish; and this was therefore such a convenience in the case of wood, as the giving a hardness and firmness to the ground was also in the case of leather, that it became an established method; and is therefore retained even in the instance of the *papier machè*, by the French who applied the received method of japanning to that kind of work on its introduction. There is nevertheless this inconvenience always attending the use of an under coat of size, that the japan coats of varnish and colour will be constantly liable to be cracked and peeled off, by any violence, and will not endure near so long as the bodies japanned in the same manner, but without any such priming; as may be easily observed in comparing the wear of the Paris and Birmingham snuff-boxes; which latter, when good of their kind, never peel or crack, or suffer any damage, unless by great violence, and such a continued rubbing, as wastes away the substance of the varnish; while the japan coats of the Parisian crack and fly off in flakes whenever any knock or fall, particularly near the edges, exposes them to be injured. But the Birmingham manufacturers, who originally practised the japanning only on metals, to
which

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which the reason above given for the use of priming did not extend, and who took up this art of themselves as an invention, of course omitted at first the use of any such under-coat; and not finding it more necessary in the instance of *papier machè*, than on metals, continue still to reject it. On which account the boxes of their manufacture are, with regard to the wear, greatly better than the French.

The laying on the colours in gum water, instead of varnish, is also another variation from the method of japanning formerly practised; but the much greater strength of the work, where they are laid on in varnish or oil, has occasioned this way to be exploded with the greatest reason in all regular manufactures: however, they who practise japanning on cabinets, or other such pieces, as are not exposed to much wear and violence, for their amusement only, and consequently may not find it worth their while to encumber themselves with the preparations necessary for the other methods, may paint with water colours on an under-coat laid on the wood, or other substance of which the piece to be japanned is formed; and then finish with the proper coats of varnish according to the methods below taught; and if the colours are tempered with the strongest isinglass size and honey instead of gum water, and laid on very flat and even, the work will not be much inferior in appearance

ance to that done by the other method; and will last as long as the old japan.

It is practised likewise in imitation of what is sometimes done in the Indian work, to paint with water colours on grounds of gold, in which case the isinglass size, with sugar-candy or honey, as above directed, is the best vehicle.

OF JAPAN GROUNDS.

The proper japan grounds are either such as are formed by the varnish and colour, where the whole is to remain of one simple colour; or by the varnish either coloured, or without colour, on which some painting or other decoration is afterwards to be laid. It is necessary, however, before I proceed to speak of the particular grounds, to shew the manner of laying on the priming or undercoat, where any such is used.

This priming is of the same nature with that called clear coating (or vulgarly clear coaling) practised erroneously by the house-painters; and consists only in laying on and drying in the most even manner, a composition of size and whiting. The common size has been generally used for this purpose, but where the work is of a nicer kind, it is better to employ the glover's or the parchment size; and if a third of isinglass be added, it will be still better; and if not laid on too thick, much less liable to peel and crack. The work should be prepared for this priming, by being well smoothed with
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the fish-skin, or glass shaver; and, being made thoroughly clean, should be brushed over once or twice with hot size, diluted with two thirds of water, if it be of the common strength. The priming should then be laid on with a brush as even as possible; and should be formed of a size, whose consistence is betwixt the common kind and glue, mixt with as much whiting as will give it a sufficient body of colour to hide the surface of whatever it is laid upon, but not more.

If the surface be very even, on which the priming is used, two coats of it, laid on in this manner, will be sufficient: but if, on trial with a fine rag wet, it will not receive a proper water polish, on account of any inequalities not sufficiently filled up and covered, two or more coats must be given it: and whether a greater or less number be used, the work should be smoothed, after the last coat but one is dry, by rubbing it with the Dutch rushes. When the last coat is dry, the water polish should be given, by passing over every part of it with a fine rag gently moistened, till the whole appear perfectly plain and even. The priming will then be completed, and the work ready to receive the painting, or coloured varnish: the rest of the proceedings in this case must be the same as where no priming is used.

OF COMMON GROUNDS OF VARNISH, WHICH
ARE TO BE PAINTED UPON.

Where wood or leather is to be japanned, and no priming is used, the best preparation is to lay two or three coats of coarse varnish, composed in the following manner :

“ Take of rectified spirit of wine one pint,
“ and of coarse seed-lac and resin each two
“ ounces. Dissolve the seed-lac and resin in
“ the spirit : and then strain off the varnish.”

This varnish, as well as others formed of spirit of wine, must be laid on in a warm place ; and, if it can be conveniently managed, the piece of work to be varnished should be made warm likewise : and for the same reason all dampness should be avoided ; for either cold or moisture chill this kind of varnish ; and prevent its taking proper hold of the substance on which it is laid.

When the work is so prepared, or by the priming with the composition of size and whitening above described, the proper japan ground must be laid on : which is much the best formed of shell-lac varnish, and the colour desired ; if white be not in question, which demands a peculiar treatment, as I shall below explain ; or great brightness be not required, when also other means must be pursued.

The colours used with the shell-lac varnish may be, any pigments whatever which give the teint of the ground desired ; and they may

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be mixt together to form browns or any compound colours : but with respect to such as require peculiar methods for the producing them of the first degree of brightness, I shall particularize them below.

The colours for grounds may otherwise be mixed with the white varnishes formed in oil of turpentine : but these varnishes have no advantages over the shell-lac but in their whiteness, that preserves the brightness of the colours ; and they are at the same time greatly inferior in hardness to it.

As metals never require to be under-coated with whiting, they may be treated in the same manner as wood or leather when the under-coat is omitted, except in the instances particularly spoken of below.

OF WHITE JAPAN GROUNDS.

The forming a ground perfectly white, and of the first degree of hardness, remains hitherto a desideratum, or matter sought for, in the art of japanning. As there are no substances which form a very hard varnish, but what have too much colour not to deprave the whiteness, when laid on of a due thickness over the work.

The nearest approach, however, to a perfect white varnish, already known, is made by the following composition.

“ Take flake white, or white lead, washed
“ over and ground up with a sixth of its
“ weight

weight of starch, and then dried ; and temper it properly for spreading, with mastic varnish, or compound them with the gum-animi." Lay these on the body to be japanned, prepared either with or without the undercoat of whiting, in the manner as above ordered : and then varnish over it with five or six coats of the following varnish.

"Provide any quantity of the best seed-lac, and pick out of it all the clearest and whitest grains ; reserving the more coloured and fouler parts for the coarser varnishes, such as that above mentioned for priming or preparing wood or leather. Take of this pickt seed-lac two ounces ; and of gum-animi three ounces ; and dissolve them, being previously reduced to a gross powder, in about a quart of spirit of wine ; and strain off the clear varnish."

The seed-lac will yet give a slight tinge to this composition ; but cannot be omitted, where the varnish is wanted to be hard : though, where a softer will answer the end, the proportion may be diminished ; and a little crude turpentine added to the gum-animi to take off the brittleness.

A very good varnish, free intirely from all brittleness, may be formed by dissolving as much gum-animi, as the oil will take, in old nut or poppy oil ; which must be made to boil gently, when the gum is put into it. The ground of white colour itself may be laid on
in

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in this varnish ; and then a coat or two of it may be put over the ground : but it must be well diluted with oil of turpentine when it is used. This, though free from brittleness, is, nevertheless, liable to suffer by being indented or bruised by any slight strokes ; and it will not well bear any polish, but may be brought to a very smooth surface without, if it be judiciously managed in the laying it on. It is likewise somewhat tedious in drying, and will require some time where several coats are laid on ; as the last ought not to contain much oil of turpentine.

OF BLUE JAPAN GROUNDS.

Blue japan grounds may be formed of bright Prussian blue ; or of verditer glazed over by Prussian blue : or of smalt. The colour may be best mixed with shell-lac varnish, and brought to a polishing state by five or six coats of varnish of seed-lac ; but the varnish, nevertheless, will somewhat injure the colour, by giving to a true blue, a cast of green ; and fouling in some degree a warm blue, by the yellow it contains. Where, therefore, a bright blue is required, and a less degree of hardness can be dispensed with, the method before directed, in the case of white grounds, must be pursued.

OF RED JAPAN GROUNDS.

For a scarlet japan ground, vermilion may be used : but the vermilion has a glaring effect, that renders it much less beautiful than the crimson produced by glazing it over with carmine or fine lake ; or even with rose pink, which has a very good effect used for this purpose. For a very bright crimson, nevertheless, instead of glazing with carmine, the Indian lake should be used, dissolved in the spirit of which the varnish is compounded (which it readily admits of when good) : and, in this case, instead of glazing with the shell-lac varnish, the upper or polishing coats need only be used ; as they will equally receive and convey the tinge of the Indian lake, which may be actually dissolved by spirit of wine : and this will be found a much cheaper method than the using carmine. If, nevertheless, the highest degree of brightness be required, the white varnishes must be used.

OF YELLOW JAPAN GROUNDS.

For bright yellow grounds, the King's yellow, or the turpeth mineral, should be employed, either alone or mixed with fine Dutch pink : and the effect may be still more heightened by dissolving powdered turmeric root in the spirit of wine, of which the upper or polishing coat is made ; which spirit of wine must
be

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be strained from off the dregs, before the seed lac be added to it to form the varnish.

The seed-lac varnish is not equally injurious here, and with greens, as in the case of other colours; because, being only tinged with a reddish yellow, it is little more than an addition to the force of the colours.

Yellow grounds may be likewise formed of the Dutch pink only; which, when good, will not be wanting in brightness, though extremely cheap.

OF GREEN JAPAN GROUNDS.

Green grounds may be produced by mixing the King's yellow and bright Prussian blue; or rather, the turpeth mineral and Prussian blue: and a cheap, but fouler kind, by verdigrise with a little of the above-mentioned yellows, or Dutch pink. But where a very bright green is wanted, the chrystals of verdigrise, (call'd *distilled verdigrise*) should be employed; and to heighten the effect, they should be laid on a ground of leaf gold, which renders the colour extremely brilliant and pleasing.

They may any of them be used successfully with good seed lac varnish, for the reason before given: but will be still brighter with the white varnish.

OF ORANGE COLOURED JAPAN GROUNDS.

Orange coloured japan grounds may be formed, by mixing vermilion, or red lead, with King's yellow, or Dutch pink.

OF PURPLE JAPAN GROUNDS.

Purple japan grounds may be produced by the mixture of lake, and Prussian blue : or a fouler kind, by vermilion and Prussian blue. They may be treated as the rest, with respect to the varnish.

OF BLACK JAPAN GROUNDS, TO BE PRODUCED WITHOUT HEAT.

Black grounds may be formed by either ivory-black, or lamp-black : but the former is preferable, where it is perfectly good.

These may be always laid on with the shell-lac varnish : and have their upper or polishing coats of common seed lac varnish ; as the tinge or foulness of the varnish can be here no injury.

OF COMMON BLACK JAPAN GROUNDS ON IRON OR COPPER, PRODUCED BY MEANS OF HEAT.

For forming the common black japan grounds by means of heat, the piece of work to be japanned must be painted over with drying oil : and when it is of a moderate dryness,
must

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must be put into a stove of such degree of heat, as will change the oil black, without burning it, so as to destroy or weaken its tenacity. The stove should not be too hot when the work is put into it, nor the heat increased too fast; either of which errors would make it blister: but the slower the heat is augmented, and the longer it is continued, provided it be restrained within the due degree, the harder will be the coat of japan. This kind of varnish requires no polish, having received, when properly managed, a sufficient one from the heat.

OF THE FINE TORTOISE SHELL JAPAN GROUND, PRODUCED BY MEANS OF HEAT.

The best kind of tortoise shell ground produced by heat is not less valuable for its great hardness, and enduring to be made hotter than boiling water without damage, than for its beautiful appearance. It is to be made by means of a varnish prepared in the following manner.

“ Take of good linseed oil one gallon, and
“ of umbre half a pound. Boil them together till the oil become very brown and
“ thick: strain it then through a coarse cloth;
“ and set it again to boil; in which state it
“ must be continued till it acquire a pitchy
“ consistence, when it will be fit for use.”

Having prepared thus the varnish, clean well the iron or copper-plate, or other piece
which

which is to be japanned; and then lay vermilion tempered with shell-lac varnish, or with drying oil diluted with oil of turpentine very thinly, on the places intended to imitate the more transparent parts of the tortoise shell. When the vermilion is dry, brush over the whole with the black varnish tempered to a due consistence with oil of turpentine; and when it is set and firm, put the work into a stove, where it may undergo a very strong heat, and must be continued a considerable time, if even three weeks or a month, it will be the better.

This ground may be decorated with painting and gilding, in the same manner as any other varnished surface, which had best be done after the ground has been duly hardened by the hot stove: but it is as well to give a second annealing with a more gentle heat after it is finished.

OF PAINTING JAPAN WORK.

JAPAN work ought properly to be painted with colours in varnish; though, in order for the greater dispatch, and, in some very nice works in small, for the freer use of the pencil, the colours are sometimes tempered in oil: which should previously have a fourth part of its weight of gum-animi dissolved in it; or in default of that, of the gums sandrac or mastic. When the oil is thus used it should be well deluted with spirit of turpentine, that the colours

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lours may be laid more evenly and thin : by which means, fewer of the polishing or upper coats of varnish become necessary.

In some instances, water colours, are laid on grounds of gold, in the manner of other paintings ; and are best, when so used, in their proper appearance without any varnish over them ; and they are also sometimes so managed as to have the effect of embossed work. The colours employed in this way, for painting, are best prepared by means of isinglass size corrected with honey, or sugar-candy. The body of which the embossed work is raised, need not, however, be tinged with the exterior colour ; but may be best formed of very strong gum water, thickened to a proper consistence, by bole-armoniac and whiting in equal parts : which being laid on in the proper figure, and repaired when dry, may be then painted with the proper colours tempered in the isinglass size, or in the general manner with shell-lac varnish

OF STAINING WOOD.

OF STAINING WOOD YELLOW.

TAKE any white wood ; and brush it over several times with the tincture of turmeric root, made by putting an ounce of the turmeric ground to powder to a pint of spirit ; and, after they have stood some days, strain-
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ing off the tincture. If the yellow colour be desired to have a redder cast, a little dragon's blood must be added, in the proportion that will produce the teint required.

A cheaper, but least strong and bright yellow, may be given to wood by rubbing it over several times with the tincture of the French berries. After the wood is again dry, it should be brushed over with a weak alum water used cold.

Lesser pieces of wood, instead of brushed over with them, may be soaked in the decoctions or tinctures.

Wood may be also stained yellow by means of aqua fortis; which will sometimes produce a very beautiful yellow colour, but at other times a browner. The wood should be warm when the aqua fortis is laid on, and be held to the fire immediately afterwards; and care must be taken, that either the aqua fortis be not too strong, or that it be sparingly used; otherwise a brown, sometimes even blackish, may be the result.

In order to render any of these stains more beautiful and durable, the wood should be rushed after it is coloured; and then varnished by the seed-lac varnish; or, when desired to be very strong, and to take a high polish, with three or four coats of shell-lac varnish, and as many of that of seed-lac,

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OF STAINING WOOD RED.

For a bright red stain for wood, make a strong infusion of Brazil in stale urine, or water impregnated with pearl ashes in the proportion of an ounce to a gallon; to a gallon of either of which, the proportion of Brazil wood must be a pound; which being put to them, they must stand together two or three days, often stirring the mixture. With this infusion strained, and made boiling hot, brush over the wood to be stained, till it appear strongly coloured; then, while yet wet, brush it over with alum water made in the proportion of two ounces of alum to a quart of water.

For a less bright red, dissolve an ounce of dragon's blood in a pint of spirit of wine; and brush over the wood with the tincture, till the stain appears to be as strong as is desired.

For a pink or rose red, add to a gallon of the above infusion of Brazil wood, two additional ounces of the pearl ashes, and use it as was before directed; but it is necessary in this case, to brush the wood over often with the alum water. By increasing the proportion of pearl ashes, the red may be rendered yet paler: but it is proper, when more than this quantity is added, to make, the alum water stronger.

These reds, when it is necessary, may be varnished as the yellows.

OF STAINING WOOD BLUE.

Wood may be stained blue by means either of copper, or indico; but the first will afford a brighter colour, and is more generally practicable than the latter, because the indico can be used only in that state to which it is brought by the manner of preparation used by the dyers; of whom indeed it must be had, as it cannot be properly so prepared but in large quantities, and with a particular apparatus. The method of staining blue with the copper is therefore as follows.

“ Take a solution of copper, and brush it while hot several times over the wood.
 “ Then make a solution of pearl ashes, in the proportion of two ounces to a pint of water; and brush it hot over the wood, stained with the solution of copper, till it be of a perfectly blue colour.”

Wood stained green as above by verdigrise, may likewise be made blue, by using the solution of the pearl ashes in the same manner.

When indico is used for staining wood blue, it must be managed thus.

“ Take indico prepared with soap-lees as when used by the dyers; and brush the wood with it boiling hot. Prepare then a solution of white tartar, or cream of tartar, which is to be made by boiling three ounces of the tartar, or cream, in a quart of water; and with this solution, used copiously,
 P 2 brush

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“ brush over the wood before the moisture of
“ the tincture of indico be quite dried out of
“ it.”

These blues may be rushed and varnished as
the reds where there is occasion.

OF STAINING WOOD OF MAHOGONY.

Mahogany colour is the most useful of any
stain for wood (especially since the fineering
with different colours is out of fashion) as it is
much practised at present for chairs and other
furniture made in imitation of mahogany;
which, when well managed, may be brought
to have a very near resemblance.

This stain may be of different hues, as the
natural wood varies greatly, being of all the
intermediate tints betwixt the red brown,
and purple brown, according to the age, or
sometimes the original nature of different
pieces.

For the light red brown, use a decoction of
madder, or fustic wood, ground in water; the
proportion may be half a pound of madder, and
a quarter of a pound of fustic, to a gallon; or
in default of fustic an ounce of the yellow ber-
ries may be used. This must be brushed over
the wood to be stained, while boiling hot, till
the due colour be obtained; and, if the wood
be kindly grained, it will have greatly the ap-
pearance of new mahogany.

The same effect nearly may be produced by
the tincture of dragon's blood, and turmeric
root,

root, in spirit of wine: by increasing or diminishing the proportion of each of which ingredients, the brown stain may be varied to a more red or yellow cast at pleasure. This succeeds better upon wood which has already some tinge of brown, than upon whiter.

For the dark mahogany take the infusion of madder made as above, except the exchanging the fustic for two ounces of logwood; and when the wood to be stained has been several times brushed over, and is again dry, it must be slightly brushed over with water in which pearl ashes have been dissolved, in the proportion of about a quarter of an ounce to a quart.

Any stains of the intermediate colours may be made by mixing these ingredients, or varying the proportion of them.

Where these stains are used for better kind of work, the wood should be afterwards varnished with three or four coats of seed-lac varnish; but for coarse work, the varnish of resin and seed-lac may be employed, or they may be only well rubbed over with drying oil.

OF STAINING WOOD GREEN.

Dissolve verdigrise in vinegar, or chrystals of verdigrise in water; and with the hot solution, brush over the wood till it be duly stained.

This may be rushed and varnished as the above.

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OF STAINING WOOD PURPLE.

Brush the wood to be stained several times with a strong decoction of logwood and Brasil, made in the proportion of one pound of the logwood, and a quarter of a pound of the Brasil, to a gallon of water; and boiled for an hour or more. When the wood has been brushed over till there be a sufficient body of colour, let it dry; and then be slightly passed over by a solution of one dram of pearl ashes in a quart of water. This solution must be carefully used, as it will gradually change the colour from a brown red, which it will be originally found to be, to a dark blue purple; and therefore its effect must be restrained to the due point for producing the colour desired.

This may be varnished as the rest.

OF STAINING WOOD BLACK.

Brush the wood several times with the hot decoction of logwood made as above; but without the Brasil: then, having prepared an infusion of galls, by putting a quarter of a pound of powdered galls to two quarts of water, and setting them in the sun-shine, or any other gentle heat, for three or four days, brush the wood three or four times over with it: and then pass over it again, while yet wet, with a solution of green vitriol in water, in proportion of two ounces to a quart.

The above is the cheapest method; but a very fine black may be produced, by brushing
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the wood several times over with a solution of copper in aqua fortis; and afterwards with the decoction of logwood, which must be repeated till the colour be of sufficient force; and the greenness, produced by the solution of the copper, wholly overcome.

These blacks may be varnished as the other colours.

Where the stains are desired to be very strong, as in the case of wood intended to be used for fineering, it is in general necessary, they should be soaked, and not brushed; to render which the more practicable the wood may be previously slit, or sawed, into pieces of a proper thickness for inlaying.

It is to be understood also, that when the wood is above ordered to be brushed several times over with the tinging substances, it should be suffered to dry betwixt each time.

Of staining ivory, bone, or horn.

OF STAINING IVORY, BONE, OR HORN.

BOIL them first in a solution of alum, in the proportion of one pound to two quarts of water; and then prepare a tincture of the French berries, by boiling half a pound of the berries, pounded, in a gallon of water with a quarter of a pound of pearl ashes. After this

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this tincture has boiled about an hour, put the ivory, &c. previously boiled in the alum water, into it; and let them remain there half an hour.

If turmeric root be used instead of the French berries, a brighter yellow may be obtained; but the ivory, &c. must in that case be again dipt in alum water after it is taken out of the tincture; otherwise, an orange colour, not a yellow, will be produced from the effect of the pearl ashes on the turmeric.

OF STAINING IVORY, BONE, AND HORN GREEN.

They must be boiled in a solution of verdigrise in vinegar; or of copper in aqua fortis, (a vessel of glass or earthen-ware being employed for this purpose,) till they be of the colour desired.

OF STAINING IVORY, BONE, AND HORN RED.

Take strong lime water, prepared as for other purposes; and the raspings of Brasil wood, in the proportion of half a pound to a gallon. Let them boil for an hour; and then put in the ivory, &c. prepared by boiling in alum water in the manner above directed for the yellow; and continue it there till it be sufficiently coloured. If it be too crimson, or verge toward the purple, it may be rendered more scarlet, by dipping again in the alum water.

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OF STAINING IVORY, BONE, AND HORN BLUE:

Stain the ivory, &c. first green, according to the manner above directed; and then dip it in a solution of pearl ashes made strong and boiling hot; but it must not be continued longer, nor dipt oftner than is necessary to convert the green to blue.

The ivory, &c. may otherwise be boiled in the tincture of indico prepared as by the dyers; and afterwards in the solution of tartar made as is directed for the staining wood.

OF STAINING IVORY, BONE, AND HORN PURPLE:

Treat them in the same manner as was directed for red, except that logwood must be substituted in the place of Brasil wood; and the use of the alum water, must be omitted wholly.

If a redder purple be wanted, a mixture of the logwood and Brasil must be employed, instead of the logwood alone. The proportion may be equal parts; or any less proportion of the Brasil, according to the colour desired.

OF STAINING HORN TO IMITATE TORTOISE SHELL.

The horn to be stained must be first pressed into proper plates, or scales, or other flat form. The following mixture must then be prepared,

“ Take

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“ Take of quicklime two parts, and of li-
 “ tharge one; and temper them to the con-
 “ sistence of a soft paste with soap-lye.”

Put this paste over all the parts of the horn, except such as are proper to be left transparent, in order to the greater resemblance of the tortoise shell. The horn must then remain thus covered with the paste till it be thoroughly dry: when the paste being brushed off, the horn will be found partly opaque, and partly transparent, in the manner of tortoise shell; and when put over a foil, of the kind of latten called assidue, will be scarcely distinguishable from it. It requires some degree of fancy and judgment, to dispose of the paste in such a manner, as to form a variety of transparent parts of different magnitude and figure, to look like the effect of nature; and it will be an improvement to add semi-transparent parts: which may be done by mixing whiting with some of the paste to weaken its operation in particular places: by which spots of a reddish brown will be produced; that if properly interspersed, especially on the edges of the dark parts, will greatly increase as well the beauty of the work, as its similitude with the real tortoise shell.

TO STAIN IVORY, BONE, AND HORN, BLACK.

Proceed in the same manner as is above directed for wood.

Of staining paper, or parchment, of various colours.

OF STAINING PAPER, OR PARCHMENT, YELLOW.

PAPER may be stained yellow by the tincture of French berries; but a much more beautiful colour may be obtained by using the tincture of turmeric, formed by infusing an ounce or more of the root, of powdered, in a pint of spirit of wine. This may be made to give any teint of yellow, from the lightest straw, to the full colour called French yellow; and will be equal in brightness even to the best dyed silks. If yellow be wanted of a warmer or redder cast, annato, or dragon's blood, must be added to the tincture.

The best manner of using these, and the following tinctures, is to spread them even on the paper, or parchment, by means of a broad brush in the manner of varnishing.

OF STAINING PAPER, OR PARCHMENT, RED.

Paper, or parchment, may be stained red by treating it in the same manner as is directed for wood, or by red ink. It may also be stained of a scarlet hue by the tincture of dragon's blood in spirit of wine; but this will not be bright.

A very

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A very fine crimson stain may be given to paper, by a tincture of the Indian lake; which may be made by infusing the lake some days in spirit of wine; and then pouring off the tincture from the dregs.

OF STAINING PAPER, OR PARCHMENT, GREEN.

Paper, or parchment, may be stained green, by the solution of verdigrise in vinegar; or by the chrystals of verdigrise dissolved in water. As also by the solution of copper in aqua fortis, made by adding filings of copper gradually to the aqua fortis till no ebullition ensues; or spirit of salt may be used in the place of the aqua fortis.

OF STAINING PAPER, OR PARCHMENT, BLUE.

A blue colour may be given to paper, or parchment, by staining it green by any of the abovementioned methods; and treating it afterwards as is directed for the staining wood blue, by the same means; or by indico, in the manner there explained likewise.

OF STAINING PAPER, OR PARCHMENT, ORANGE.

Stain the paper, or parchment, first of a full yellow, by means of the tincture of turmeric as above directed. Then brush it over with a solution of fixt alkaline salt, made by dissolving half an ounce of pearl ashes, or salt of tartar, in a quart of water, and filtering the solution.

OF

OF STAINING PAPER, OR PARCHMENT,
PURPLE.

Paper, or parchment, may be stained purple by archal; or by the tincture of logwood, according to the method above directed for staining wood. The juice of ripe privet berries expressed will likewise give a purple dye to paper or parchment.

Of staining alabaster, marble, and
other stones of various colours.

A LABASTER, marble, and other stones, may be stained of a yellow, red, green, blue, purple, black, or any of the compound colours, by the means above given for staining wood; but it is better, when a strong tinge is wanted, to pour the tincture, if made in water, boiling hot on the alabaster, &c. spreading it equally on every part, than to brush it over only; though that may be sufficient where a slighter dye will suffice. When tinctures in spirit of wine are used, they must not be heated, as the spirit would evaporate, and leave the tinging gums in an undissolved state. Where stones are not perfectly white, but partake of brownness or greyness, the colour produced by the tinges will be proportionably

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wanting in brightness; because the natural colour of the stone is not hid or covered by these tinges; but combines with them: and, for the same reason, if the stone be of any of the pure colours, the result will be a compound of such colour and that of the tinge.

F I N I S.

